
Chapter 13 — ISDN Feature Implementation

Overview

The information found in this section can be used to program option features associated with ISDN, and assumes that the basic 2 Mb PRI feature, as described in "2 Mb PRI Implementation", has been implemented completely.

Note: In this section, responses in parentheses are the default responses.

Advice of Charge

The AOC capability may be configured for the following Central Office connectivities:

- AXE-10 Australia (at end of call)
- EuroISDN (at call set-up, during a call, end-of-call)
- INS1500 (Japan D70) (at end of call)
- Numeris (at end of call)
- Numeris (during a call)
- SwissNet (during a call)
- 1TR6 (at end of call)

AXE-10 Australia (end of call)

LD 17 – Select PPM functionality and CDR format.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
...		
PARM	YES	System parameters.
MTRO	PPM	Periodic Pulse Metering.

LD 15 – Use this overlay to allow Charge Display and CDR Charge.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB	Customer data block.
CUST	xx	Customer number.
...		
OPT	CHDA	Charge display allowed. Release 21 gate opener is FTR.
...		
- UCST	x	Unit cost, x = (0)-9999. Release 21 gate opener is PPM.

LD 16 – Allow AOC on the route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
...		
ISDN	YES	Configure ISDN data.
IFC	AXEA	ISDN Interface for Australia. Must be configured in LD 17 for the applicable D-channel.
...		
CDR	YES	Call Detail Recording.
...		
OTL	YES	CDR on outgoing toll calls.
...		
OAN	YES	CDR on all answered outgoing calls.
...		
MR	ENDC	AOC End of Call allowed for international ISDN interfaces.
RUCS	1	Route unit cost value received is treated as charge.
RUCF	1 0	Route unit conversion factor, no conversion required.

LD 10/11– Assign meters to sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Telephone type where aaaa = 500,2500, SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Terminal Number.
...		
CLS	MRA	Message Registration Allowed.

LD 12 – Assign a Meter Recall key to the Attendant Console.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Type of console, where aaaa = 1250 for M1250 console, 2250 for M2250 console, ATT for QCW3, QCW4 console, or PWR if the TN is used for power or Attendant Supervisory Module ASM.
TN	c u	Terminal Number.
...		
KEY	xx MTR	Assign a Meter recall key on the attendant console.

EuroISDN (call set-up, during call, end of call)**LD 17** – The following steps assume an ISDN interface is already set up.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Change I/O devices.
- ADAN	CHG DCH XX	Change D-channel, xx = 0-15.
...		
- IFC	EURO	EuroISDN interface.
- CNTY	AUS DEN EIR (ETSI) FIN GER ITA NOR POR SWE DUT	Austria. Denmark. Ireland. ETS 300-102 basic protocol. Finland. Germany. Italy. Norway. Portugal. Sweden. Holland.

LD 15 – Allow Charge Display and CDR Charge.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB	Customer data block.
CUST	xx	Customer number.
...		
OPT	CHDA	Charge display allowed. Release 21 gate opener is FTR.
...		
- UCST	x	Unit cost, x = (0)-9999. Release 21 gate opener is PPM.

LD 16 – Allow AOC on the route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...		
ISDN	YES	Configure ISDN data.
...	...	Other ISDN sub-prompts.
-IFC	EURO	EuroISDN interface.

-- CNTY	AUS DEN EIR (ETSI) FIN GER ITA NOR POR SWE DUT	Austria. Denmark. Ireland. ETS 300-102 basic protocol. Finland. Germany. Italy. Norway. Portugal. Sweden. Holland.
...		
MR	(NO) ENDC DURC STAC	No AOC service. AOC-E subservice activated. AOC-D subservice activated. AOC-S subservice activated. Not printed for Denmark and Sweden.
RUCS	0-9999	Route unit cost. Not printed for Denmark and Sweden
RURC	0-9999 (0)-3	Route unit reference cost. Note that the formula for the route unit reference cost is: $X \cdot 10^{(-Y)}$, where $X=0-9999$, and $Y=0-3$. The default value for X is identical to the previously entered RUCS value. Not printed for Denmark and Sweden.
RUCF	0-(1)-9999 (0)-3	Route unit conversion factor. Note that the formula for the route unit reference cost is: $X \cdot 10^{(-Y)}$, where $X=0-9999$, and $Y=0-3$. The default value for X is identical to the previously entered RUCS value. Not printed for Denmark and Sweden.

LD 10/11 – Assign meters to sets.

Prompt	Response	Description
REQ	NEW,CHG	New, or change.
TYPE	aaaa	Telephone type where aaaa = 500, 2500, SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Terminal Number.
CLS	MRA	Message Registration allowed.

LD 12 – Assign a Meter Recall key to the Attendant Console.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Type of console, where aaaa = 1250 for M1250 console, 2250 for M2250 console, ATT for QCW3, QCW4 console, or PWR if the TN is used for power or Attendant Supervisory Module ASM.
TN	c u	Terminal Number.
...		
KEY	xx MTR	Assign a Meter recall key on the attendant console.

INS1500 (Japan D70) (end of call)**LD 17** – Select PPM functionality and CDR format.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
PARM	YES	Parameters for Interface and transmission mode.
...		
FCDR	NEW	Use New CDR format (recommended for Japan).
...		
MTRO	PPM	Periodic Pulse Metering.

LD 15 – Use this overlay to allow Charge Display and CDR Charge.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB	Customer data block.
CUST	xx	Customer number.
...		
OPT	CHDA	Charge display allowed. Release 21 gate opener is FTR.
...		
- UCST	x	Unit cost, x = (0)-9999. Release 21 gate opener is PPM.

LD 16 – Allow AOC on the route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
...		
ISDN	YES	Configure ISDN data.
IFC	D70	ISDN Interface for Japan.
...		
CDR	YES	Call Detail Recording.
...		
OTL	YES	CDR on outgoing toll calls.
...		
OAN	YES	CDR on all answered outgoing calls.
...		
MR	ENDC	AOC End of Call allowed for international ISDN interfaces.
RUCS	1	Route unit cost value received is treated as charge.
RUCF	1 0	Route unit conversion factor, no conversion required.

LD 10/11– Assign meters to sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Telephone type where aaaa = 500, 2500, SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Terminal Number.
...		
CLS	MRA	Message Registration Allowed.

LD 12 – Assign a Meter Recall key to the Attendant Console.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Type of console, where aaaa = 1250 for M1250 console, 2250 for M2250 console, ATT for QCW3, QCW4 console, or PWR if the TN is used for power or Attendant Supervisory Module ASM.
TN	c u	Terminal Number.
...		
KEY	xx MTR	Assign a Meter recall key on the Attendant Console.

Numeris (end of call)

LD 17– Change Configuration Record to allow PPM.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
PARM	YES	Parameters for Interface and transmission mode.
...		
MTRO	PPM	Periodic Pulse Metering.

LD 12 – Assign a Meter recall key on the Attendant Console.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	aaaa	Type of console, where aaaa = 1250 for M1250 console, 2250 for M2250 console, ATT for QCW3, QCW4 console, or PWR if the TN is used for power or Attendant Supervisory Module ASM.
TN	c u	Terminal number.
...		
KEY	xx MTR	key number, Meter key.

LD 15 – Configure the Customer Data Block for AOC.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CDB FTR	Customer data block. Features and options. Release 21 gate opener.
CUST	xx	Customer number.
...		
ICI	xx MTR	ICI number, Meter Recall.

LD 15 – Configure Periodic Pulse Metering.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB PPM	Customer data block. Periodic Pulse Metering. Release 21 gate opener.
CUST	xx	Customer number.
HMTL	(YES) NO	Hotel/Motel environment.
PCDL	YES	PPM output on CDR Link. Additional three words added to tape record.
UCST	x	Unit cost for Periodic Pulse Metering, x=(0)-9999.
ATCH	(NO) YES	Attendant display of call charge.

LD 16 – Modify the Trunk Route for AOC.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Type of data block.
CUST	xx	Customer number.
...		
OAL	YES	CDR on Outgoing calls.
- OTL	YES	CDR on Outgoing toll calls.
...		
CCO	YES	Printing CDR records for no PPM or AOC count.
...		
MR	ENDC	The AOC information is decoded at the end of the call.
...		
RUCF	x y	Route Unit Conversion Factor.

Numeris and SwissNet (during call)**LD 17 – Select PPM functionality and CDR format.**

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
PARM	YES	Parameters for Interface and transmission mode.
...		
MTRO	PPM	Periodic Pulse Metering.

LD 15 – Allow Charge Display and CDR Charge.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB PPM	Customer data block. Periodic Pulse Metering. Release 21 gate opener.
CUST	xx	Customer Number.
HMTL	(YES) NO	Hotel/Motel environment.
PCDL	YES	Allow PPM output on CDR Link
...		
- UCST	x	Unit cost, x = (0)-9999.
...		
- OPT	CHDA	Charge display allowed. Release 21 gate opener is FTR.

LD 16 – Allow AOC on the route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...		
ISDN	YES	Configure ISDN data.
IFC	NUME SWIS	ISDN Interface for Numeris (France). ISDN Interface for Swis (Switzerland).
CDR	YES	Call Detail Recording.
OTL	YES	CDR on outgoing toll calls.
OAN	YES	CDR on all answered outgoing calls.
MR	DURC	AOC during a call.
CCO	TES	Disable the printing of CDR N records.
RUCS	1	Route unit cost value received is treated as charge.
RUCF	1 0	Route unit conversion factor, no conversion required.

LD 10/11 – Assign meters to sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Telephone type where aaaa = 500, SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Terminal Number.
...		
CLS	MRA	Message Registration Allowed.

LD 12 – Assign a Meter Recall key to the Attendant Console.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	aaaa	Type of console, where aaaa = 1250 for M1250 console, 2250 for M2250 console, ATT for QCW3, QCW4 console, or PWR if the TN is used for power or Attendant Supervisory Module ASM.
TN	c u	Terminal Number.
...		
KEY	xx MTR	Assign a Meter recall key on the attendant console.

1TR6 (end of call)**LD 12 – Assign a Meter recall key on the Attendant Console.**

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ATT	QCW3 or QCW4 Attendant Console data block.
TN	c u	Terminal Number.
...		
KEY	x MTR x NULL	key number, Meter key. Remove a Meter key.

LD 15 – Configure the Customer Data Block for AOC.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CDB NET	Customer data block. ISDN and ESN Networking options. Release 21 gate opener.
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network allowed for customer.
...		
- PFX1	xxxx	Prefix 1.
- PFX2	xxxx	Prefix 2.

LD 15 – For nodes with 1TR6 connections, call charging and charge recording must be configured.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CDB ATT	Customer data block. Attendant Console options. Release 21 gate opener.
CUST	xx	Customer number.
...		
ICI	x MTR	ICI number, Meter Recall.

LD 15 – For nodes with 1TR6 connections, call charging and charge recording must be configured.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CDB PPM	Customer data block. Periodic Pulse Metering. Release 21 gate opener.
CUST	xx	Customer number.
HMTL	(YES) NO	Hotel/Motel environment.
PCDL	YES	PPM output on CDR Link. Additional three words added to tape record.
UCST	(0) - 9999	Unit Cost for Periodic Pulse Metering.
ATCH	(NO) YES	Attendant display of call Charge.
SCDL	(0) 1 2 3	Schedule for printing Message Registration and PPM data. No scheduled printing. Daily printout. Weekly printout. Monthly printout.
- WKDY	1-7	Week Day for weekly printout. Where 1 = Sunday.
- DAY	0-28	Day of month for printout.
- HOUR	hh or hh hh	Hour of day for printout.
- MCLR	(NO) YES	Meter Clear after printing.
- PTTY	(0)-15	PPM TTY number for printing meters, one per switch.

LD 17 – Change LD 17 to allow for AOC.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	All input/output devices.
ADAN	CHG DCH x	Action device and number, x = 0-15.
...		
ISDN	YES	Integrated Services Digital Network.
...		
- IFC	1TR6	1 TR6 for Germany.
- CNEG	(1) 2	Channel Negotiation option.
- LAPD	YES	Link Access Protocol for D-channel. Change LAPD parameters.
-- T203	2-(10)-40	Maximum Time allowed without frames being exchanged in seconds.

LD 16 – Change the Trunk Route for AOC.

Prompt	Response	Description
REQ	NEW, CHG	New, or change
TYPE	RDB	Route data block.
CUST	xx	Customer number
ROUT	xx	Route number.
...		
ISDN	YES	Integrated Services Digital Network
- IFC	1TR6	1TR6 for Germany

LD 16 – For nodes with 1TR6 connections configuring call-charge metering and printing

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route data block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...		
CDR	YES	Call Detail Recording.
- OAL	YES	CDR on outgoing calls.
- - OTL	YES	CDR on Outgoing Toll calls.
CCO	(NO) YES	
RUCS	0-9999	Route Unit Cost.

Attendant and Network Wide Remote Call Forward

Set-based Configuration

LD 15 – Set the Station Control Password Length.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB FFC_DATA	Customer data block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
-SCPL	0-8	Station Control Password Length (must be consistent network wide).
...		

LD 15 – Configure a Special Prefix Number (SPRE) for the customer.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB FTR_DATA	Customer data block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
- SPRE	xxxx	Special Prefix Number.
...		

LD 10 – Set the Station Control Password and allow Call Forward.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	500	Telephone type.
TN	c u	Card, and unit.
SCPW	xxxxxxx	Station Control Password (0 to 8 digits, defined in LD 15).
KEY	xx CFW 4-(16)-23	Assign Call Forward key (xx) and set the forwarding DN length.

LD 11 – Set the Station Control Password and allow Call Forward.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Card, and unit.
SCPW	xxxxxxx	Station Control Password (0 to 8 digits, defined in LD 15).
KEY	xx CFW 4-(16)-23	Assign Call Forward key (xx) and set the forwarding DN length.

LD 57 – Define Remote Call Forward FFCs and set FFCT.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Codes.
CUST	0-31	Customer number.
FFCT	(NO), YES	Confirmation tone is (is not) to be given after an FFC.
CODE	RCFA	Remote Call Forward Activate.
RCFA	xx	xx = RCFA code.
CODE	RCFD	Remote Call Forward Deactivate.
RCFD	xx	xx = RCFD code.
CODE	RCFV	Remote Call Forward Verify.
RCFV	xx	xx = RCFV code.

Attendant-based Configuration

LD 12 – A new Flexible Attendant feature key, RFW, has been added to this overlay. Configuration of the key on the Attendant Console is required to allow attendant access to the RCFW feature. Configuration of the RFW key is only allowed if the ARFW package is equipped.

Prompt	Response	Description
REQ	NEW,CHG	New, or change.
TYPE	ATT, 1250, 2250	Attendant type – the RFW key can be configured on QCW4, M1250, and M2250 Attendant Consoles.
TN	c u	Card, and unit.
...		
KEY	xx RFW	Key number assigned as Attendant Remote Call Forward key.

LD 15 – Configure the Attendant RCFW password.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB ATT_DATA	Customer data block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
- IRFR	(NO), YES	Internal Remote Call Forward Password required.
-- IRFP	xxxxxxx	Internal RCFW Password (only prompted if the response to IRFR is YES). The password length is one to eight digits; the password is numeric only.
- XRFR	(NO), YES	External Remote Call Forward Password required.
-- XRFP	xxxxxxx	External RCFW password (only prompted if the response to XRFR is YES). The password length is one to eight digits; the password is numeric only.
...		

Attendant Blocking of DN

LD 12 – Configure the SACP key on the Attendant Console.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ATT, 1250, 2250	Attendant Console type.
TN	c u	Terminal Number for the Option 11.
...		
KEY	xx SACP	Semi-automatic Camp-on key.

LD 15 – Enable the Attendant Blocking of DN feature.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB ATT	Customer Data Block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
ATT	YES	Change Attendant Console options.
...		
- SACP	(NO), ALL, SNGL	Semi-automatic Camp-on not allowed. Semi-automatic Camp-on for all Camp-on occurrences. Semi-automatic Camp-on an a per call basis.
- ABDN	(NO), YES	Activation of the Attendant Blocking of DN feature is (not) allowed. The ABDN prompt only appears when the SACP package is equipped.

Attendant Through Dialing Networkwide

LD 15 – Allow Attendant Through Dialing Networkwide.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	ATT	Attendant Console data block.
CUST	xx	Customer number.
OPT	(ATDA)	Attendant Through Dialing Allowed (default). ATDD = Attendant Through Dialing Denied.

Note: The configuration of Improved End-to-End Signaling in Overlay 15 and Calling Line Identification in Call Detail Recording Record are optional. Improved End-to-End Signaling sends the digits dialed by the calling party on the established link in a more efficient manner than End-to-End Signaling. A Call Detail Recording record on the outgoing trunk node shows the outgoing trunk in the ID field and the calling Directory Number in the CLID field if the outgoing trunk is on the attendant's node.

LD 15 – Configure Improved End-to-End Signaling.

Note: In Release 19 and later, Improved End-to-End Signaling is provided when EEST = YES and DTMF = NO.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	FTR	Customer Features and options.
CUST	xx	Customer number.
...		
EEST	YES	Send feedback tone to the originator of End-to-End Signaling.
- DTMF	NO	For Release 19 and later, use Improved End-to-End Signaling for single tone feedback.

LD 17 – Allow Calling Line Identification (CLID) field in Call Detail Recording (CDR) records.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	PARM	System parameters.
...		
- FCDR	(OLD) NEW	Format for Call Detail Recording OLD CDR format (default). NEW CDR format.
...		
- CLID	YES	Calling Line Identification in Call Detail Recording.

Automatic Redial

LD 13 – Define Tone Detector Units.

Prompt	Response	Description
REQ	NEW	Add.
TYPE	TDET	Tone Detector data block.
TN	c u	Terminal Number.

LD 15 – Define Automatic Redial.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	FTR	Change features and options.
CUST	xx	Customer number.
...		
-ARDL_ATTEMPT	1-(30)-60	Number of Automatic Redial attempts.
REQ:	CHG	Change.
TYPE:	TIM	Change Timers.
CUST	xx	Customer number.
...		
- ARDL_ACCEPT	0-(20)-60	Automatic Redial Acceptance Timer in seconds. Odd number entries are rounded up to the next even number and echoed back with a message.
- ARDL_RETRY	10-(30)-60	Automatic Redial Retry Timer in seconds. Odd number entries are rounded up to the next even number and echoed back with a message.

LD 16 – Define Automatic Redial Tone Detector Response Timer.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route number.
...		
CNTL	YES	Changes to controls or timers.
TIMR	RTD 0-(12)-60	Tone Detector Response Timer in seconds. Odd number entries are rounded up to the next even number.

LD 87– Define Automatic Redial Network Route Selection.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
CUST	xx	Customer number.
FEAT	NCTL	Network Control Feature.
...		
NCOS	(0) - 99	Network Class of Service group number.
- ARDL	(A) I	A = Automatic Redial network route selection allowed from all route sets (initial and extended). I = Automatic Redial network route selection allowed from initial set of routes only.

LD 11 – Assign Automatic Redial Class of Service and Key.

Prompt	Response	Description
REQ:	NEW, CHG	Add, or Change.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2016, 2216, or 2616.
...		
CLS	RDLA	Automatic Redial allowed (default). RDLD = Automatic Redial denied.
KEY	xx RGA	Ring Again key assignment.
KEY	xx RGA	Ring Again key assignment for Multi-Automatic Redial capability.

Backup D-channel

Basic PRI or ISL administration must be performed before the backup D-channel is defined. Changes in the following service-change program are required to configure the Backup D-channel feature.

Overlay	Action
LD 17 Configuration Record	Configure the backup D-channel and active the recovery to primary D-channel feature.

Use LD17 and perform one of the following procedures depending on your software version.

Prior to X11 release 18

Follow this procedure and use LD 17 to configure the backup D-channel for prior to X11 release 18 software.

Prompt	Response	Description
REQ	CHG	
TYPE	CFN	Configuration Data Block
ISDN	YES	Change the ISDN parameters
•		
BCHI	1-15	backup DCHI port number
CDNO	1 - 9	Card number of the PRI loop which will support the Backup D-channel
PORT	1	Must be set to 1 for the NTAK79
•		
BCHL	1 - 9	2 Mb PRI loop number for the BCHI. This will be the same as the response to the CDNO prompt.
USR		
RCVP	YES, (NO)	See Table 33 before continuing. Recovery to Primary D-channel option. When RCVP is YES, the primary D-channel becomes the active D-channel. Defining this prompt has to be coordinated with the far end. Both sides either have to be YES or NO. If the two sides do not match, both sides default to NO.

X11 release 18 and later

Follow this procedure and use LD17 to configure the backup D-channel for X11 release 18 and later software.

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW BDCH 0-63	Add a backup D-channel (also CHG, MOV, and OUT BDCH)
PDCH	1-15	Primary D-channel
CTYP	DCHI, MSDL	Card type
DNUM	0-15	Device number: physical port (odd) for D-channel on DCH, physical card address for MSDL
_PORT	1	Port number on MSDL card
USR	PRI, ISLD, SHA	D-channel mode
_ISLM	1-382	Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...9	PRI loop number for DCHI
OTBF	1-(32)-127	Number of output request buffers
_BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)
_PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
BCHL	0,2,4,...9	PRI loop number for back-up D-channel
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>, ****	Go on to next prompt or exit overlay

Table 33
Recovery to primary D-channel RCVP prompt responses

RCVP = YES	RCVP = NO
primary D-channel up—active backup D-channel up	primary D-channel up—active backup D-channel up
primary D-channel down backup D-channel up—active (see below)	primary D-channel down backup D-channel up—active
primary D-channel up—active backup D-channel up	primary D-channel up backup D-channel up—active

When RCVP is YES, the primary D-channel is down, and the backup D-channel is up, and the following occurs. First the switch tries to re-establish the primary D-channel connection. If this cannot be done successfully, then the backup D-channel is switched in. When the primary D-channel is brought up again, the primary D-channel becomes the active D-channel.

If RCVP is NO and the primary D-channel is down, the backup D-channel remains active when the primary D-channel is brought up. It is important to note that the backup D-channel remains the active D-channel.

Call Forward, Break-In and Hunt Internal or External Network Wide

LD 15 – Define Network Wide definition of Internal/External Calls in Customer Data Block.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	FTR	Customer Features and options.
CUST	xx	Customer number.
- IDEF	YES	Network-wide internal or external definition for Call Forward/Hunt by Call Type, Internal Call Forward and Break-In Indication Prevention. Calls will be treated as internal or external according to the network-wide definition. NO = call will be treated as internal or external as it was previously programmed.

LD 16 – Modify Route Data Block to Define Internal/External Calls.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
CUST	xx	Customer number.
ROUT	0-511	Route number.
...		
RCLS	(EXT) INT	Route Class marked as External or Internal.

IDEF	(NET) LOC	Internal/External Definition. If NET is entered, any call over the selected route will receive network treatment according to available network information. If LOC is entered, the route class of the selected route will supercede any other information. A call over this route will receive internal treatment if the route class is set to internal, otherwise it will receive external.
Note: The prompt IDEF will output only if IDEF = YES in the Customer Data Block. If IDEF = NO, any information that was entered previously at the IDEF prompt will not influence the treatment received by a call.		

Call Page Network Wide

LD 16 – Configuring Paging Route.

Prompt	Response	Description
REQ	NEW	New.
TYPE	RDB	Route data block.
CUST	xx	Customer Number associated with route.
...		
TKTP	PAG	Paging Route.
NACC	(PGNR) PGNC PGNU	Call Page Network Wide Restricted (default). Call Page Network Wide controlled (ISDN only) Call Page Network Wide uncontrolled (PGNU is equivalent to ISDN/Analog media.)
ICOG	OGT	Outgoing trunk.
TARG	1-15	Trunk Access Restriction Group.

LD 16 – Configuring BRI Trunk Route.

Prompt	Response	Description
REQ	NEW	New.
TYPE	RDB	Route data block.
CUST	xx	Customer number.
...		
DTRK	YES	Digital Trunk route.
DGTP	BRI	Digital Trunk type.
RCAP	NAC	Remote capability where: NAC = Class of Service data. XNAC = removes Class of Service as a remote capability (default).

LD 14 – Paging Trunk Configuration.

Prompt	Response	Description
REQ	NEW	New.
TYPE	PAG	Trunk type.
TN	c u	Terminal number.
RTMB	0 - 511 1- 254	Route number, Member number.

LD 10 – Assign Class of Service to Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ:	NEW, CHG	New, or change.
TYPE:	500	Type telephone.
...		
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 11 – Assign Class of Service to Meridian 1 Proprietary Telephones.

Prompt	Response	Description
REQ:	NEW, CHG	New, or change.
TYPE:	xxxx	Telephone type, where xxxx= SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
...		
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 27 – Assign Class of Service to ISDN BRI sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	DSL	Type of data block.
DSL	l s c dsl	Digital Subscriber Loop address.
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 17 – D-channel Message Configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Input or Output Devices.
ADAN	CHG DCH x	Change D-channel. x = 0-63.
- CTYP	MSDL	Downloadable D-Channel Daughterboard.
RCAP	NAC	Remote capability where: NAC = Class of Service data. XNAC = removes Class of Service as a remote capability (default).

Call Park Network Wide

LD 15 – Enable Call Park Network Wide.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	FTR	Features and options. Release 21 gate opener.
CUST	xx	Customer number.
- OPT	CPN	Enable Call Park Network Wide. CPA = Enables Call Park. CPD = Disables Call Park (default).

LD 50 – Add/Change Customer Call Park Data.

Prompt	Response	Description
REQ	NEW, CHG, PRT	New, or change, or print.
TYPE	CPK	Call Park data block.
CUST	xx	Customer number.
BLOC	1-5	Call Park data block number. Primary Call Park (block 1) must be defined for Call Park operation. Block 1 must be initially defined before attempting to remove.
CPTM	30-(45)-480	Call Park Timer (in seconds).
RECA	(NO) YES	Call Park Recall to Attendant.
SPDN	(0)-100 xx...x	Number of contiguous system park DN's and first DN of that range.
MURT	0-511	Music Route number for parked call.

LD 10 – Enable Call Park for Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ:	NEW, CHG	New, or change.
TYPE:	500	Telephone type.
TN	c u	Terminal Number.
CLS	XFA	Call Transfer Allowed. XFD = Call Transfer Denied.

LD 11 – Add/Change Call Park Key on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ:	NEW, CHG	New, or change.
TYPE:	xxxx	Telephone type where: aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number.
KEY	xx PRK xx TRN xx AO3 xxAO6	Key assignment for Call Park. Key number for Transfer. Three Party Conference. Six Party Conference.

LD 12 – Add/Change Call Park Key on Attendant Consoles.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	xxxx	Console type.
TN	c u	Terminal Number.
KEY	xx PRK	Key number, Call Park.

Calling Line Identification

Basic PRI or ISL administration must be performed before Calling Line Identification (CLID) is defined (see PRI Configuration and ISL data administration). Changes in the following service-change programs are required to configure the CLID feature.

CAUTION

Third-party software is not guaranteed if this feature is activated. If the third-party software does not recognize the CLID field, it may shut down

Step 1: Respond to the following prompt in Overlay 17.

Prompt	Response	Description
•		
•		
MANU		
CLID	YES,(NO)	enable (do not enable) CLID in CDR Note: Package 118, CLID in CDR, is required.

Step 2: Respond to the following prompt in Overlay 15.

Prompt	Response	Description
•		
ISDN		
•		
•		
CNTP	(PDN) LDN	calling number type—determines the class of service associated with CLID for all sets, except those configured differently in Overlays 10 and 11. Note: Attendant consoles have only a Listed Directory Number (LDN). —the CLID feature displays the set's Prime Directory Number —the CLID feature displays the customer's Listed Directory Number

Step 3: Respond to these prompts in Overlays 10 and 11.

Prompt	Response	Description
REQ	NEW, CHG, MOV, OUT	
TYPE	set type	as appropriate
TN	c u	terminal number address —card (1-10) —unit (0-7)
XLST		
CLS	(PDN) LDN	—the set's Prime Directory Number —the customer's Listed Directory Number

Call Charging under 1 TR 6 Connections

In overlay 12:

- For nodes with 1 TR 6 connections, respond to the TYPE prompt with ATT. Respond to the KEY prompt with 0-9 MTR for each attendant console to have a Meter key. (Respond with 0-9 NULL to remove a Meter key.)

In overlay 15:

- Respond to the ISDN prompt with YES. This gives rise to the PFX1 and PFX2 prompts. Respond to these with Prefix 1 and Prefix 2 respectively (each a maximum of four digits). This information is sent out as part of the Call Setup message.

For nodes with 1 TR 6 connections, call charging and charge recording must be configured in overlay 15:

- Respond to the ICI prompt with xxMTR to assign a meter recall key on an ICI position at attendant consoles.
- Respond to the PPMD prompt with YES to enter periodic pulse metering (PPM) data, or NO to continue without being prompted for PPM data. If you are entering PPM data, respond to the HMTL prompt with YES to select the Hotel/Motel option, or NO to suppress this option. Respond to the PCDL prompt with YES to generate call charging information in the CDR Link tape records, or NO to suppress this option. Define the call charge unit cost by responding to the UCST prompt with a value from 1 to 9999. (Entering a value of 0 disables this option.) Respond to the ATCH prompt with YES to display call charge information on the attendant console, or NO to prevent display.

- If PPMD was enabled, select schedules for the output of Message Registration and Call Charging information. Respond to the SCDL prompt with 0 to prevent scheduled printing, 1 to get a daily printout, 2 to get a weekly printout or 3 to get a monthly printout. If you did not enter 0, the WKDY prompt appears. Respond to this with a number from 1 to 7; this indicates the day of the week (1 being Sunday) on which weekly printouts are generated. Respond to the DAY prompt with a number from 1 to 28; this indicates the day of the month on which monthly printouts are generated. Respond to the HOUR prompt with a number from 0 to 23; this indicates the hour of the day during which daily printouts are generated. (If you enter a space and then a second hour, printouts are generated twice daily, at the specified times.) Once the schedule has been completed by responding to these prompts, the MCLR prompt appears. Respond with YES to have meters cleared after printing, or NO to leave the meters uncleared. Respond to the PTTY prompt with a number from 0 to 15. This is the port number for automatic printing.

In overlay 17:

- Respond to the ISDN prompt with YES.
- Respond to the IFC prompt with either
AXEA (to configure for an AXE-10 for Australia)
AXES (to configure for an AXE-10 for Sweden)
SS12 (to configure for a SYS-12)
SWIS (to configure for SwissNet), or
1TR6 (to configure for a 1 TR 6 channel protocol connection).
- Respond to the CNEG (outgoing calls only) prompt with either 1, to deny channel negotiation, or 2 to allow it.
- Respond to the LAPD prompt with YES.
- Respond to the T203 prompt with a value between 2 and 40. (This is the maximum time, in seconds, to be allowed without the exchange of frames.)

In overlay 16:

- Respond to the ISDN prompt with YES.
- Respond to the IFC prompt with either
AXEA (to configure for an AXE-10 for Australia)
AXES (to configure for an AXE-10 for Sweden)
SS12 (to configure for a SYS-12)
SWIS (to configure for SwissNet), or
1TR6 (to configure for a 1 TR 6 channel protocol connection).

For nodes with 1 TR 6 connections, call-charge metering and printing must be configured in overlay 16:

- Respond to the CDR prompt with YES.
- Respond to the OAL prompt with YES.
- Respond to the OTL prompt with YES.
- Respond to the CCO prompt with YES to prevent the printing of CDR records containing no call charging information, or NO to allow this printing.
- Respond to the RUCS prompt with a number between 0 and 9999, to define the call charge unit cost on a route basis.

Call Connection Restriction

To configure the operation of the Call Connection Restriction product improvement, enter responses to the following prompts in overlay 15.

RCNT: This limits the number of call redirections to be allowed in a call connection. Respond to this prompt with the limit, from 0 to 5.
(The default is 1.)

PSTN: This limits to one the number of PSTNs allowed in a call connection. Respond to this prompt with YES to place the limit; respond with NO to allow an unlimited number of PSTNs in a call connection.

TNDM: This limits the number of tandem connections allowed in a call connection. Respond to this prompt with the limit, from 0 to 31
(the default value is 15).

PCMC: This limits the number of μ /A-Law conversions to be allowed in a call connection. Respond to this prompt with the limit, from 0 to 31. (the default value is 15).

SATD: This limits the number of Satellite delays to be allowed in a call connection. Respond to this prompt with the limit, from 0 to 5. (the default value is 1).

The above prompts only appear if the ISDN prompt in overlay 15 is set to YES. For more information on the prompts presented in overlay 15, refer to the Option 11 software guides.

Call Forward/Hunt Override via Flexible Feature Code

LD 57 – Define FFC for Call Forward/Hunt Override.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	FFC	Flexible Feature Code.
...		
CODE	CFHO	Call Forward/Hunt Override Via FFC.
CFHO	nnnn	Call Forward/Hunt FFC.
...		

LD 10 – Set class of service for the Forward/Hunt Override Via FFC feature.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	500	Type of telephone set.
...		
CLS	(CFHD), CFHA	Call Forward/Hunt Override Via FFC is (denied) or allowed.
...		

LD 11 – Set class of service for the Forward/Hunt Override Via FFC feature for Meridian 1 propriety sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	xxxx	Type of telephone set.
...		
CLS	(CFHD), CFHA	Call Forward/Hunt Override Via FFC is (denied) or allowed.
...		

LD 18 – Configure ABCD key for the Forward/Hunt Override Via FFC feature.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	ABCD	Modifying 16-button DTMF.
...		
PRED	YES	Function table for pre-dial.
A	CFHO*FFC*	CFHO is assigned to key A.
B	CFHO*FFC*	CFHO is assigned to key B.
C	CFHO*FFC*	CFHO is assigned to key C.
D	CFHO*FFC*	CFHO is assigned to key D.

Call Pickup Network Wide

Use the following procedure to configure Call Pickup Network Wide.

Note: minimum software vintage of Generic X11 Release 21 in order for Call Pickup Network Wide to be functional. The software Release ID is defined in LD 17.

LD 10 – Assign a Ringing Pickup Group number to an analog (500/2500 type) telephone, and define with the Class of Service which of the Call Pickup features are allowed to be activated from this station.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	500	Telephone type.
TN	c u	Terminal Number for the Option 11.
...		
RNPG	(0)-4095	Ringing Number Pickup Group (RNPG). If the RNPG is set to 0 (the default) on a station, it is not possible to pick up any call ringing this station from any other set. Enter 0 to remove a station from the RNPG. Note: If the RPNG is two or more digits in length, it must be configured in the Customer Data Block (LD 15), so that it may use the Group Pickup key. See the procedure which follows LD 11.
...		
CLS	(PUD), PUA	Ringing Number Pickup (denied) allowed.
	(DPUD), DPUA	DN pickup (denied) allowed.
	(GPUD), GPU A	Group pickup (denied) allowed.

LD 11 – Assign a pickup group to a Meridian 1 proprietary telephone. Define with the Class of Service which of the Call Pickup features are allowed to be activated from this station.

The configuring of different pickup keys is optional, since the Call Pickup and Directed Call Pickup features can be activated by dialing the SPRE + xx or by dialing a Flexible Feature Code. The Digit Display key is needed for the Display Call Pickup feature.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	aaaa	Telephone type, where: aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, and 3000.
TN	c u	Terminal Number for the Option 11.
...		
RNPG	(0)-4095	Ringing Number Pickup Group (RNPG). If the RNPG is set to 0 (the default) on a station, it is not possible to pick up any call ringing this station from any other set. Enter 0 to remove a station from the RNPG. Note: If the RPNG is two or more digits in length, it must be configured in the Customer Data Block (LD 15), so that it may use the Group Pickup key. See the procedure which follows.
...		
CLS	(PUD), PUA	Ringing Number Pickup (denied) allowed.
	(DPUD), DPUA	DN pickup (denied) allowed.
	(GPUD), GPU A	Group pickup (denied) allowed.
...		
KEY	xx RNP yyyy	Key number, Ringing Number Pickup, Pickup Group number (optional). If the Group number is not entered, the key will pick up calls in the group assigned to the station. If the Group number is entered, the key will pick up calls in the specified group yyyy.

KEY	xx GPU	Key number, Group Number Pickup.
KEY	xx DPU	Key number, DN Pickup.
...		
KEY	xx DSP	Key number, Digit Display.

LD 15 - If the customer's Ringing Number Pickup Group is two or more digits in length (as configured in LD10/11, in response to the RNPG prompt), it must be configured in the Customer Data Block (in response to the PKND prompt); otherwise the Group Pickup key cannot be used by the group.

Prompt	Response	Comment
REQ:	CHG	Change existing data block
TYPE:	FTR_DATA	Customer Features and options
CUST	0-31	Customer number
- OPT	aaa	Options
- DGRP	(0)-2046	Maximum number of Dial Intercom Groups
- IRNG	(NO) YES	Intercom Ring
- PKND	(1)-4	Number of digits Dialed for Group Pickup
...		

LD 57 – Define the Flexible Feature Codes (FFCs) used to activate Call Pickup and Directed Call Pickup from a an analog (500/2500 type) telephone. The FFCs may also be used on Meridian 1 proprietary telephone sets.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Code.
CUST	0-31	Customer number.
...		

CODE	mmmm	Specific FFC type.
- PURN	xxxx	Pickup Ringing Number code.
- PUGR	xxxx	Pickup Group code.
- PUDN	xxxx	Pickup DN code.

LD 18 – Configure a Speed Call List. This Speed Call List will be used by a Ringing Number Pickup Group (RNPG) or a set of RNPGs as a search list to scan the MCDN network.

The Speed Call List entries should contain digits which can be used to route a network Call Pickup request to a remote node (e.g., mainly the ISDN PINX DNs of the remote nodes which will be scanned after a network Call Pickup request). There must be no gaps in the Speed Call List (i.e., each Speed Call List entry should be present). If during the network scanning a missing Speed Call List entry is encountered, the network scanning is stopped (as if the Speed Call List was exhausted).

Due to the time it takes to scan the remote node, it is strongly recommended to configure less than six entries in the Speed Call List.

Prompt	Response	Description
REQ	NEW, CHG, OUT	New, change, or remove.
TYPE	SCL	Speed Call List.
LSNO	0-8190	Speed Call List number
...		
DNSZ	4-(16)-31	Maximum size of DNs allowed for Speed Call list.
SIZE	1-1000	Maximum number of DNs allowed in Speed Call list. Note: The size cannot be greater than the value entered against the STOR prompt below.
...		
STOR	000-319 xxxx	Speed Call List entry number and digits (PINX DN) stored against it. Note: The STOR entry cannot be blank.

LD 18 – On a per customer basis, define the Ringing Number Pickup Groups that are network wide by assigning them to one of the previous defined Speed Call Lists. Different RNPGs may be assigned to different Speed Call Lists.

Prompt	Response	Description
REQ	NEW, CHG, OUT	New, change, or remove.
TYPE	CPNW	Call Pickup Neywork Wide data.
CUST	0-31	Customer number.
LSNO	0-8190	A Speed Call List associated with Call Pickup network wide groups.
- GRP	0-4095	Ringing Number Pickup Group (RNPG) using this Speed Call List. Repeat for all groups sharing the same list. Enter <CR> to reprompt LSNO.
	X	Enter X to remove an RNPG.

LD 17 – Define the software Release ID at the far end of the D-Channel. Both the target and destination switches must be equipped with a minimum software vintage of Generic X11 Release 21 in order for Call Pickup Network Wide to be functional.

Prompt	Response	Description
REQ	CHG	Change I/O device.
ADAN	CHG DCH 0-63	Change D-channel information
- RLS	21	Release ID of the switch at the far end of the D-channel.
...		Note: Both the target and destination switches must be equipped with a minimum software vintage of Release 21.

LD 15 – Define the customer's Private Integrated Network Identifier (PNI) and Private Integrated Services Network Exchange (PINX) DN.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	NET_DATA	Networking data.
CUST	0-31	Customer number.
...		
ISDN	YES	Allow ISDN for this customer.
- PNI	1-32700	Define the Private Network Identifier.
- PINX_DN	xx...x	Node DN, up to seven digits with DN Expansion package 150.
	X	Enter X to remove.

LD 15 – Define the special prefix code (SPRE) to be able to activate the Call Pickup features by dialing SPRE + xx.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FTR_DATA	Customer Features and options
CUST	0-31	Customer number.
...		
- SPRE	xxxx	Special Prefix number for this customer.
...		

LD 16 – Configure the PNI on the route. This PNI must correspond to the one configured in LD 15 on the target (remote) node.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
ROUT	0-511	Route number.
...		
ISDN	YES	ISDN is allowed on this route.
- PNI	1-32700	Define the Private Network Identifier.

Calling Party Privacy

LD 57 – Define the FFC for CPP feature. FFC package 139 is required for loading LD 57.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	FFC	Flexible Feature Code.
CUST	xx	Customer number.
FFCT	(NO) YES	Flexible Feature Confirmation Tone.
...		
CODE	CPP	FFC type to be altered. CPP entry is only allowed if the CPP package is equipped. <CR> means that no FFC types are prompted.
...		
CPP	(*67) nnnn	Calling Party Privacy code. CPP is prompted only if the CPP package is equipped. Any arbitrary digit sequence up to four digits can be specified. For Meridian 1 proprietary set, an “*” can be entered as the first digit. CPP will be prompted until a <CR> is entered.

LD 16 – Define Privacy Indicators. CPP is only prompted if the CPP package is equipped, the OPAO package 104 is **not** equipped, the trunk outgoing (OGT) or incoming and outgoing (IAO), non-ISDN option and the trunk route type is COT, DID, FEX, or WAT.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.

TKTP	COT DID FEX WAT	Central Office Trunk data block. Direct Inward Dialing trunk data block. Foreign Exchange trunk data block. Wide Area Telephone Service trunk data block.
...		
DTRK	YES	Digital trunk route.
DGTP	DTI DTI2	Digital trunk type.
ISDN	YES	ISDN PRI option.
...		
ACOD	nnnn	Trunk Access Code.
CPP	YES	Calling Party Privacy. YES = This trunk route is enabled for the recognition of the Calling Party Privacy feature. CPP is only prompted if the following conditions are met: the CPP package is equipped, the OPAO package is not equipped, OGT (outgoing) or IAO (incoming and outgoing) trunk, non ISDN option and trunk route type is COT/DID/FEX/WAT. The default value for the CPP prompt is NO.
TCP	(NO) YES	CPP for an incoming trunk call tandemmed to this trunk route. YES = An incoming non-ISDN trunk call tandemmed to this trunk route will carry the Privacy Indicator. The default value for the TCP is NO.
- DTPI	nnnn	Privacy Indicator for a digitone trunk. DTPI is prompted only if CPP is set to "YES" and the trunk route is non-ISDN. If CPP is changed from NO to YES, the default is *67. Any arbitrary digit sequence (0-9) up to four digits can be specified. An asterisk "*" is allowed to be the first digit only if the outgoing call goes to a Public Network.

- DPPI	nnnn	Privacy Indicator for a dial pulse trunk. DPPI is prompted only if CPP is set to “YES” and the trunk route is non-ISDN. If CPP is changed from NO to YES, the default is 1167. Any arbitrary digit sequence (0-9) up to four digits can be specified.
- PII	(NO) YES	Calling Party Privacy Indicator is honored. Calling Party Privacy Indicator is ignored. PII is prompted with X11 Release 23 and later. Note: PII is only prompted when the CPP package is equipped; the trunk route type is COT, DID, FEX, or WAT; the ISDN option is set to YES; the ISDN Interface (IFC) is D100, D250, ESS4, ESS5, or NI2; and the route is Incoming and Outgoing (IAO) or Incoming Only Trunk (ICT).

LD 10/11 – Activate Calling Party per-line blocking. CLBA Class of Service activates Calling Party per-line blocking. CLBD Class of Service deactivates Calling Party per-line blocking; however, the user can still request Calling Party Privacy by dialing the CPP code.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	nnnn	Type of telephone.
TN	c u	Terminal Number.
...		
CLS	CLBA	Activate Calling Party per-line blocking. Enter CLBD to deactivate Calling Party per-line blocking (default). Note: CLBA Class of Service activates Calling Party per-line blocking. CLBD Class of Service deactivates Calling Party per-line blocking; however, the user can still request Calling Party Privacy by dialing the CPP code.

Display of Calling Party Denied

LD 10 – Deny Directory Number Display and Name Display for Analog (500/2500 type) sets.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	500	500/2500 type set data block.
TN	c u	Terminal Number.
...		
CLS	DDGD	Digit Display Denied DDGA = Digit Display Allowed (default).
CLS	NAMD	Name Display Denied NAMA = Name Display Allowed (default).

LD 11 – Deny Digit Display and Name Display for Meridian 1 proprietary sets.

Prompt	Response	Description
REQ:	CHG.	Change.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number.
...		
CLS	DDGD	Digit Display Denied DDGA = Digit Display Allowed (default).
CLS	NAMD	Name Display Denied NAMA = Name Display Allowed (default).

E.164/ESN Numbering Plan Expansion

LD 10 — For analog (500/2500 type) sets, configure the expansion pertaining to the Autodial, Call Forward All Calls, Default Call Forward (for Phantom TNs) and Internal Call Forward DN.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE:	500	Type of telephone set.
TN	c u	Terminal Number.
...		
FTR	ADL nn x..x	Autodial where nn = number of digits up to a maximum of 31 in Autodial DN and x..x = Autodial DN.
	CFW (4)-31	Enter the maximum number of digits in the Call Forward All Calls DN. Note that there is no default value.
	DCFW ll xxx...x	Enter the maximum number of digits in the Default Call Forward DN for a Phantom DN. ll = 4,8,12,16,20,24,28,31 (entries are rounded up to the next valid length.) xx...x = the Default Call Forward All Calls DN.
	ICF (4)-31	Enter the maximum number of digits in the Internal Call Forward DN for a Phantom DN.

LD 11 – For Meridian 1 proprietary sets, configure the expansion pertaining to the Autodial, Call Forward All Calls, Default Call Forward (for Phantom TNs) and Internal Call Forward DN.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE:	xxxx	Type of telephone set. xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2116, 2317, 2616, M3000.
TN	c u	Terminal Number.
KEY	nn ADL ll xxx...x	Telephone function key assignments. Enter the maximum number of Autodial digits that may be stored. nn = Key number ll = 4,8,12,(16),20,24,28,31,NUL (for M3000 sets, the accepted range is (4)-28) Entries are rounded up to the next valid length. An entry of NUL will disable the Autodial feature xx...x = the Autodial target DN (this is an optional entry.)
	nn CA ll xxx...x	Enter the maximum number of digits that may be stored for the combined Conference-Autodial DN. nn = Key number ll = 4,8,12,(16),20,24,28,31 (entries are rounded up to the next valid length.) xx...x = the Conference-Autodial target DN (this is an optional entry.)
	nn CFW ll xxx...x	Enter the maximum number of digits that may be stored for the Call Forward All Calls DN. nn = Key number ll = (4)-31 (for M2317 and M3000 sets, the accepted range is (4)-23) xx...x = the Call Forward All Calls DN (this is an optional entry.)
	nn ICF ll xx...x	Enter the maximum number of digits that may be stored for the Internal Call Forward DN. nn = Key number ll = (4)-31 xx...x = the Internal Call Forward DN (this is an optional entry.)

LD 12 – For attendant consoles, configure the expansion pertaining to the maximum length of the Autodial DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	xxxx	Type of attendant console xxxx = 1250, 2250.
TN	c u	Terminal Number.
KEY	nn ADL xxx...x	Attendant console function key assignments. Enter the maximum number of Autodial digits that may be stored. nn = Key number xxx...x = the Autodial DN, up to 31 digits (this is an optional entry.)

LD 15 - Configure the expansion pertaining to the Customer Call Forward DN.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE:	RDR	Redirection data.
CUST	xx	Customer number.
...		
- CCFWDN	xxx...x X	Enter the Customer Call Forward DN, up to 23 digits (this entry is made for a new CCFWDN, or if the length of an existing CCFWDN has been expanded.) Enter X for no entry.

LD 23 - Configure the expansion pertaining to the ACD Night Call Forward DN and the ACD Interflow DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	ACD	Automatic Call Distribution data block.
CUST	xx	Customer number.
ACDN	xxx...x	ACD DN.
...		
NCFW	xxx...x	Enter the ACD Night Forward DN, up to 31 digits (this entry is made for a new Night Forward DN, or if the length of an existing Night Forward DN has been expanded.)
...		
IFDN	xxx...x	Enter the ACD Interflow DN, up to 31 digits (this entry is made for a new Interflow DN, or if the length of an existing Interflow DN has been expanded.)

LD 86 - For the ESN data block, configure the expansion pertaining to the maximum number of Supplemental Digit Restriction and Recognition blocks, and the maximum number of Digit Manipulation tables.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	ESN	ESN data block feature.
...		
MXSD	(0)-1500	Enter the maximum number of Supplemental Digit Restriction and Recognition (SDRR) blocks, for BARS or NARS. Enter 0 (the default) if no SDRR blocks are required.
...		
MXDM	(0)-1000 (0)-256 (0)-32	Enter the maximum number of Digit Manipulation tables. (0)-1000 = for Flexible Numbering Plan (0)-256 = for BARS/NARS (0)-32 = for Coordinated Dialing Plan Enter 0 (the default) if no Digit Manipulation tables are required.

LD 86 - For the Digit Manipulation data block, configure the expansion pertaining to the maximum number of leading digits to be deleted and inserted.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	DGT	Digit Manipulation data block feature.
...		
DMI	1-999 1-255 1-31	Enter the Digit Manipulation table. 1-999 = for Flexible Numbering Plan 1-255 = for BARS/NARS 1-31 = for Coordinated Dialing Plan. The maximum number of Digit Manipulation tables is defined using prompt MXDM, in the ESN data block.
DEL	(0)-19	Enter the number of leading digits to be deleted. Enter 0 (the default) for none.
INST	x...x x...x*y...y X	Enter the number of leading digits to be inserted. x...x = 1-31 x...x*y...y = for Special Common Carriers (SCCs), 1-30, including access number (x...x), delimiter (*), and authorization code (y...y) Enter X for none.

LD 86 - For the Route List data block, configure the expansion pertaining to the minimum Overlap Digit Length.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	RLB	Route List data block feature.
RLI	0-999	Route List Index.
DMI	1-999 1-255 1-31	Enter the Digit Manipulation table. 1-999 = for Flexible Numbering Plan 1-255 = for BARS/NARS 1-31 = for Coordinated Dialing Plan. The maximum number of Digit Manipulation tables is defined using prompt MXDM, in the ESN data block.
...		
OVLL	(0)-24	Enter the minimum Overlap Digit Length, pertaining to Overlap Sending. If 0 (the default) is entered, then the Flexible Digit Number Length (FLEN) determines whether Overlap Sending takes place.

LD 87 - For a Free Special Number Screening Index, configure the expansion pertaining to the maximum number of Special Numbers to be screened.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	FSNS	Free Special Number Screening.
FSNI	1-255	Free Special Number Screening Index.
SPN	1-19	Special Number to be screened.

LD 87 - For a Trunk Steering Code, configure the expansion pertaining to the maximum number of Flexible Numbers.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	CDP	Coordinated Dialing Plan.
TYPE	TSC	Trunk Steering Code.
TSC	1-7	Trunk Steering Code.
- FLEN	0-24	Flexible Number.

LD 90 - For Network Translation tables, configure the expansion pertaining to the maximum number of Special Numbers digits, the maximum number of digits for Flexible Numbers, the maximum number of Supplemental Digit Restriction and Recognition digits per entry, and the addition of “allow” (ALLOW) as a new Supplemental Digit Restriction and Recognition type.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	xx	Customer number.
FEAT	NET	Network Translation Tables data.
...		
TYPE	SPN	Special Number Translation.
SPN	xxxx xxxx x...x	Enter the Special Number Translation digits. Up to 19 digits may be entered. The SPN digits must be entered in groups of at most four digits, separated by a space. Up to five groups can be entered. The restriction is removed of allowing one less digit if the first digit of a digit string is not “1”.
- FLEN	(0)-24	Enter the number of Flexible Digits (the number of digits that the system expects to receive before accessing a trunk, and outputting the digits.)
...		
- SDRR	DENY LDID LDDD DID DDD ITED ARRN STRK ALLOW	Type of Supplemental Digit Restriction and Recognition. Restricted codes. Recognized local DID codes. Recognized local DDD codes. Recognize remote DID codes. Recognize remote DDD codes. Incoming trunk group exclusion digits. Alternate routing remote number. Allowed codes for ADM/MDM. Allowed codes.

		The maximum number of digits entered in response to the DENY, LDID, LDDD, DID, DDD and ALLOW prompts, which follow, must be less than 10, or 7-m (8-m for 1+ dialing) for Central Office translation data (NXX), 10-m (11-m for 1= dialing) for Numbering Plan Area Code translation data (NPA), or 19-m for Special Numbers Translation data (SPN), where m = the number of digits entered for the prompt NXX, NPA or SPN. These numbers are no longer required to be leftwise unique. For non leftwise unique numbers, the longer number takes precedence over the shorter number. However, the exact same numbers (non leftwise unique and the same length) are still blocked.
-- DENY	x...x	Restricted number to be denied.
-- LDID	x...x	Local DID number to be recognized.
-- LDDD	x...x	Local DDD number to be recognized.
-- DID	x...x	Remote DID number to be recognized.
-- DDD	x...x	Remote DDD number to be recognized.
-- ALLOW	x...x	Code to be allowed.

Electronic Lock Network Wide/Electronic Lock on Private Lines

Electronic Lock Network Wide

Use the following overlays to implement Electronic Lock Network Wide.

LD 15 – Modify Customer Data Block for Controlled Class of Service data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	CCS_DATA	Controlled Class of Service data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- ECC1	aaa	Enhanced Controlled Class of Service level 1.
- ECC2	aaa	Enhanced Controlled Class of Service level 2.
- CNCS	0-99	Network Controlled Class Of Service for Electronic Lock.
- PELK	YES	Electronic Lock on Private Lines.

LD 15 – Modify Customer Data Block for Flexible Feature Code data as follows:

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	FFC_DATA	Flexible Feature Code data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- SCPL	0-8	Station Control Password Length.
- SBUP	(YES) NO	Enable use of station control passwords for set based administration user level access

-- PWD2	xxxx	PWD2 password for confirmation
- FFCS	(NO) YES	Change Flexible Feature Code end-of-dialing indicator
-- STRL	1-3	String Length of end-of-dial indicator
-- STRG	xxx	String to indicate end-of-dialing
- ADLD	(0)-20	Auto Dial Delay in seconds
- SCPL	0-8	Station Control Password Length

LD 10 – Set the Station Control Password and Controlled Class of Service Allowed for each analog (500/2500 type) telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add,Change.
TYPE	500	Telephone type.
CUST	0-31	Customer Number.
TN	c u	Card, and unit.
SCPW	xxxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.

LD 11 – Set the Station Control Password and Controlled Class of Service Allowed for each Meridian 1 proprietary telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add,Change.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
CUST	0-31	Customer Number.
TN	c u	Card, and unit.
SCPW	xxxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).

CLS	CCSA	Controlled Class of Service Allowed.
-----	------	--------------------------------------

LD 57 – Configure the Flexible Feature Codes for Electronic Lock.

Prompt	Response	Description
REQ	NEW/CHG	Enter new/change data.
TYPE	FFC	Flexible Feature Codes.
CUST	0-31	Customer Number.
FFCT	YES	Provide FFC confirmation tone.
CODE	ELKA	New/change Electronic Lock Activate FFC.
ELKA	xxxx	Enter the new or changed Electronic Lock Activate FFC
ELKA	<cr>	
CODE	ELKD	New/change Electronic Lock Deactivate FFC.
ELKD	xxxx	Enter the new or changed Electronic Lock Deactivate FFC
ELKD	<cr>	

LD 87 – In the ESN 2 overlay, define all NCOS to be used.

Prompt	Response	Description
REQ	NEW/CHG	Enter new/change data.
CUST	0-31	Customer Number.
FEAT	NCTL	Network Control.
...		
NRNG	0-99	NCOS range.
NCOS	0-99	Network Class of Service group number.
...		
– FRL	(0)-7	Facility Restriction level.

Electronic Lock on Private Lines

Use the following overlays to implement Electronic Lock Network on Private Lines.

LD 15 – Modify Customer Data Block for Controlled Class of Service data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	CCS_DATA	Controlled Class of Service data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- ECC1	aaa	Enhanced Controlled Class of Service level 1.
- ECC2	aaa	Enhanced Controlled Class of Service level 2.
- CNCS	0-99	Network Controlled Class Of Service for Electronic Lock.
- PELK	YES (NO)	Electronic Lock on Private Lines (for a private line); otherwise enter NO.

LD 15 – Modify Customer Data Block for Flexible Feature Code data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	FFC_DATA	Flexible Feature Code data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- SCPL	0-8	Station Control Password Length.
- SBUP	(YES) NO	Enable use of station control passwords for set based administration user level access
- - PWD2	xxxx	PWD2 password for confirmation

- FFCS	(NO) YES	Change Flexible Feature Code end-of-dialing indicator
-- STRL	1-3	String Length of end-of-dial indicator
-- STRG	xxx	String to indicate end-of-dialing
- ADLD	(0)-20	Auto Dial Delay in seconds
- SCPL	0-8	Station Control Password Length

LD 16 – Set the Facility Restriction Level (FRL) number and the New Flexible Code Restriction (NFCR) tree number for private lines.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route Data Block.
...		
PRIV	YES	Private Line Route.
...		
FRL	0-7 0-254	Facility Restriction Level (FRL) and New Flexible Code Restriction (NFCR) tree number.

LD 10 – Set the Station Control Password and Controlled Class of Service Allowed for each analog (500/2500 type) telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add,Change.
TYPE	500	Telephone type.
CUST	0-31	Customer number.
TN	c u	Card, and unit.
SCPW	xxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.

LD 11 – Set the Station Control Password and Controlled Class of Service Allowed for each Meridian 1 proprietary telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add,Change.
CUST	0-31	Customer number.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Card, and unit.
SCPW	xxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.
...		
KEY	xx PVR yyyy(yyy)	Key number and DN for Private Line Ringing, where xx = the key number and yyyy(yyy) = the Private Line Ringing DN (up to four digits; up to seven digits if the Directory Number Expansion (DNXP) package 150 is equipped). Private Line Directory Number (PRDN) must be defined in LD 14.

Equi-distribution NAS routing

Use the following procedure to configure Equi-distribution NAS routing.

Procedure 1

Configuring equi-distribution for NAS routing

Step	Overlay	Action
1	LD 15 Customer Data Block	Define the efficiency factor loading level.
2	LD 93 Multi-Tenant Service	Define the efficiency factor loading level.
3	LD 86 ESN	Define the attendant alternatives for NAS routing.
4	LD 86 ESN	Enable/disable Drop Back Busy option.

Step 1

Enter the following command in Overlay 15.

Prompt	Response	Description
EFL	0 — 8064	The efficiency factor loading level. If the default value of 0 is entered, then the Equi-distribution NAS Routing feature is not activated, and normal NAS routing occurs.

Step 2

Enter the following command in Overlay 93.

Prompt	Response	Description
EFL	0 — 8064	The efficiency factor loading level. If the default value of 0 is entered, then the Equi-distribution NAS Routing feature is not activated, and normal NAS routing occurs.

Step 3

Enter the following command in Overlay 93.

Prompt	Response	Description
ALST	1 - 7	Attendant alternatives for NAS routing (up to 4 alternatives may be defined for each schedule period).

Step 4

Enter the following command in Overlay 93.

Prompt	Response	Description
DBK	YES, (NO)	YES = Drop Back Busy allowed, NO = Drop Back Busy denied.

Error Handling on ISDN Signaling Link Analog E&M TIE Trunks

LD 16 – Configure ISL on Analog Trunks.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	RDB	Route data block.
...		
DTRK	NO	Digital trunk route.
ISDN	YES	ISDN Primary Rate Interface option.
MODE	ISLD	Mode of D-channel controlling the route.
...		
FALT	YES	Enables the error handling and recognition of E lead error for ISL E&M Tie Trunks. If FALT= NO, then no error handling with occur.

EuroISDN Continuation

LD 10 – Configure Fax Allowed Class of Service for Analog (500 type) set.

Prompt	Response	Description
REQ:	NEW	Add.
TYPE:	500	Telephone type.
...		
CLS	FAXA	Fax Class of Service allowed for set or modem. ISDN call is generated with 3.1 KHz bearer capability. FAXD = Fax Class of Service denied.

LD 17 – Create a new D-channel.

Prompt	Response	Description
REQ	NEW	Add.
TYPE	ADAN	Action Device and Number.
- ADAN	NEW DCH x	New D-channel at port number x.
- CTYP	MSDL	Downloadable D-Channel Daughterboard.
- GRP	0-4	Network Group Number.
- DNUM	0-15	Device number for I/O ports.
- PORT	0-3	Port number on MSDL card.
- USR	PRI	D-channel for ISDN PRI only. Precede with X to remove.
IFC	EURO	Interface type for D-channel, where: EURO = EuroISDN.
	SWIS	IFC SWIS is for PRI2 (SN2).

-- CNTY	AUS DEN (ETSI) FIN GER ITA NOR POR SWE EIR DUT SWI BEL ESP UK	Austria. Denmark. ETS 300-102 basic protocol. Finland. Germany. Italy. Norway. Portugal. Sweden. Ireland. Holland. Switzerland. Belgium. Spain. United Kingdom.
...		
-- DCHL	0-159	PRI loop number.
- RCAP	COLP	Enter COLP to support Connected Line Identification Presentation as a remote capability. Enter XCOL to remove Connect Line Identification Presentation.
PINX_CUST	0-99	This customer number will be used for DN address translation, associated with bearer independent connection messages received on this D-channel.
...		
PARM	CHG	Change system parameters.
BCAP	(SPEE) 31KH	Speech (the default). 3.1 Khz bearer capability setting for outgoing voice calls.

LD 16 – Configure new DID routes (the same responses to the IFC and CNTY prompts, as were used in LD 17, must be entered.)

Prompt	Response	Description
REQ	NEW	Add.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route number.
TKTP	DID	Trunk type, where: DID = Direct Inward Dialing.
...		
DTRK	YES	Digital trunk route.
- DGTP	PRI	Digital trunk type for route.
- IFC	EURO SWIS	Interface type for route, where: EURO = EuroISDN. IFC SWIS is for PRI2 (SN2).
- - CNTY	AUS DEN (ETSI) FIN GER ITA NOR POR SWE EIR DUT SWI BEL SPA UK	Austria. Denmark. ETS 300-102 basic protocol. Finland. Germany. Italy. Norway. Portugal. Sweden. Ireland. Holland. Switzerland. Belgium. Spain. United Kingdom.

CLID	OPT0	Prefix = 0, for North American dialing plan. This is the default value for ESIG and ISIG interfaces.
	OPT1	Prefix = 1, for international PFXs in CLID, any numbering type supported. This is the default value for all EuroISDN interfaces.
	OPT2	Prefix = 2, for international PFXs in CLID, CCITT numbering type supported: UKWN, INTL, NPA, and NXX. Default value for CO/DID routes for the Telecom New Zealand interface.
	OPT3	Prefix = 3, for international PFXs in CLID, only NXX number type supported. Default value for TIE routes for the Telecom New Zealand interface.
	OPT4	For international COs, if the call originates from a CO trunk type, add nothing. Otherwise, add PFX1 and PFX2. This is the default value for the Hong Kong, Singapore, and Thailand interfaces.
	OPT5	This is the same as OPT4, except it supports a maximum of 10 digits in the CLID. This is the default value for the Austrian interface.
PROG	NCHG	Send PROGRESS (default value for all interfaces, except Austria).
	MALE	Send ALERT after CALL PROCEEDING.
	MCON	Send CONNECT after CALL PROCEEDING (this is the default value for the Austrian interface).
...		
RCAP	COLP	Connected Number IE Presentation is supported on the far end (enter XCOLP to remove COLP).
- CPFXS	(YES) NO	Customer-defined Prefixes option. This prompt is added as one of the sub-prompts of ISDN = YES. It is added at the end of the ISDN sub-prompts. If CPFXS = YES, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Customer Data Block via the PFX1 and PFX2 prompts in LD 15, as is currently done. This is the default response. If CPFXS = NO, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Route Data Block via the HNTN and HLCL prompts in LD 16.

-- HNTN	0-9999	Home National Number. This number is similar to the PFX1 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX1, the HNTN prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
HLCL	0-9999	Home Location Number. This number is similar to PFX2 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX2, the HLCL prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
ADDP	(NO), YES	YES = the prefixes 0 (national) or 00 (international) are added to the Calling Party Number if the Type of Number (TON) is public. NO = the Calling or Connected Party Number displayed is not modified.

LD 14 – Configure new DID trunks.

Prompt	Response	Description
REQ	NEW xx	Add a new data block to the system. Follow NEW with a value of 1-255 to create that number of consecutive trunks.
TYPE	DID	Direct Inward Dialing data block.
TN	c u	Terminal number.
...		
RTMB	0-511 1-254	Route number; Member number.

EuroISDN Continuation Phase III

LD 15 – Configure the Optional Sending of Forwarding CLID functionality (in response to the OCLI prompt).

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking data.
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network.
PNI	(0)-32700	Private Network Identifier.
...		
SATD	0-(1)-5	Satellite Delays.
OCLI	(NO)	NO = No manipulation is done on outgoing CLID for calls forwarded over EuroISDN links.
	EXT	EXT = The last forwarding DN is sent as CLID information for incoming calls over a standard ISDN (EuroISDN, APAC, NI-2) DID or CO link to a gateway Meridian 1 node, and redirected back over the standard ISDN (EuroISDN, APAC, NI-2) DID or CO link.
	ALL	ALL = The same as for EXT. Moreover, the last forwarding DN is sent as CLID information for internal calls from a local set or over ISDN TIE trunks, except for DPNSS1 calls which are redirected from a gateway node over a standard ISDN (EuroISDN, APAC, NI-2) DID or CO link. If the redirection does not occur at the gateway node, the redirecting information number, if present in the incoming SETUP message received at the gateway node from the private network, is sent as CLID.
....		

LD 17 – Create a new D-channel for the EuroISDN interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Action Device and Number.
- ADAN	NEW DCH x	New D-channel at port number x.
- CTYP	MSDL	Card type, where MSDL = Multipurpose Serial Data Link for Meridian Options 51C-81C, or Downloadable D-Channel Board for Option 11C.
- GRP	0-4	Network Group Number.
- DNUM	0-15	Device number for I/O ports.
- PORT	0-3	Port number on MSDL card.
- USR	PRI	D-channel for ISDN PRI only. Precede with X to remove.
- IFC		DCH interface type.
	EURO	EURO = EuroISDN
-- CNTY		Enter country pertaining to EuroISDN interface.
	AUS	Austria
	DEN	Denmark
	(ETSI)	ETS 300-102 basic protocol
	FIN	Finland
	GER	Germany
	ITA	Italy
	NOR	Norway
	POR	Portugal
	SWE	Sweden
	EIR	Ireland
	DUT	Holland
	SWI	Switzerland
	BEL	Belgium
	ESP	Spain
	UK	United Kingdom
	FRA	France
	CIS	Commonwealth of Independent States (Russia and the Ukraine).

PINX_CUST	xx	The customer number used for the DN address.
...		
DCHL	0-159	The PRI loop number for the D-Channel.
-- CNEG	(1) 2	Channel Negotiation option. (1) = Channel is indicated and no alternative is acceptable. This is the default value for all EuroISDN Interfaces except FRA. 2 = Channel is indicated and any alternative is acceptable. This is the default value for the FRA interface.
- RCAP	COLP XCOL	Enter COLP to support Connected Line Identification Presentation as a remote capability. This is the default value for the ESIG, ISIG, NI2, and EURO interfaces. Enter XCOL to remove Connect Line Identification Presentation as a remote capability. This is the default value for the APAC, AUS, EIR, DEUT, ESP, BEL, and FRA interfaces.

LD 16 – Configure new DID routes (the same responses to the IFC and CNTY prompts, as were used in LD 17, must be entered).

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change or delete existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
TKTP	DID COT	Trunk type. DID = Direct Inward Dialing COT = Central Office.
...		
DTRK	YES	Digital trunk route.

- DGTP	PRI2 BRI	Digital trunk type for route.
...		
- IFC	EURO	Interface type. EURO = EuroISDN.
-- CNTY	AUS DEN (ETSI) FIN GER ITA NOR POR SWE EIR DUT SWI BEL ESP UK FRA CIS	Enter country pertaining to EuroISDN and Asia Pacific interface type. Austria Denmark ETS 300-102 basic protocol Finland Germany Italy Norway Portugal Sweden Ireland Holland Switzerland Belgium Spain United Kingdom France Commonwealth of Independent States (Russia and the Ukraine).
ICOG	IAO OGT ICT	Incoming and Outgoing trunk. Outgoing trunk only. Incoming trunk only.
ACOD	x..x	Access code for this trunk route.

- CLID	OPT0	Prefix = 0, for North American dialing plan. This is the default value for ESIG and ISIG interfaces.
	OPT1	Prefix = 1, for international PFXs in CLID, any numbering type supported. This is the default value for all EuroISDN interfaces.
	OPT2	Prefix = 2, for international PFXs in CLID, CCITT numbering type supported: UKWN, INTL, NPA, and NXX. Default value for CO/DID routes for the Telecom New Zealand interface.
	OPT3	Prefix = 3, for international PFXs in CLID, only NXX number type supported. Default value for TIE routes for the Telecom New Zealand interface.
	OPT4	For international COs, if the call originates from a CO trunk type, add nothing. Otherwise, add PFX1 and PFX2. This is the default value for the Hong Kong, Singapore, and Thailand interfaces.
- PROG	OPT5	This is the same as OPT4, except it supports a maximum of 10 digits in the CLID. This is the default value for the Austrian interface.
	NCHG	Progress Signal.
	MALE	Send PROGRESS (default value for all interfaces, except Austria).
	MCON	Send ALERT after CALL PROCEEDING.
...		
- RCAP	COLP	Send CONNECT after CALL PROCEEDING (this is the default value for the Austrian interface).
	XCOL	Enter COLP to support Connected Line Identification Presentation as a remote capability. This is the default value for the ESIG, ISIG, NI2, and EURO interfaces.
...		Enter XCOL to remove Connect Line Identification Presentation as a remote capability. This is the default value for the APAC, AUS, EIR, DEUT, ESP, BEL, and FRA interfaces.

- CPFXS	(YES) NO	Customer-defined Prefixes option. This prompt is added as one of the sub-prompts of ISDN = YES. It is added at the end of the ISDN sub-prompts. If CPFXS = YES, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Customer Data Block via the PFX1 and PFX2 prompts in LD 15, as is currently done. This is the default response. If CPFXS = NO, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Route Data Block via the HNTN and HLCL prompts in LD 16.
- - HNTN	0-9999	Home National Number. This number is similar to the PFX1 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX1, the HNTN prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
HLCL	0-9999	Home Location Number. This number is similar to PFX2 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX2, the HLCL prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
ADDP	(NO) YES	If ADDP = NO, the Calling or Connected Party Number displayed is not modified. If ADDP = YES, the prefixes 0 (national) or 00 (international) are added to the Calling Party Number if the Type of Number (TON) is public.

LD 17 – Configure the Numbering Plan Identification (NPI) and Type of Number (TON) fields to be included in the CDR tickets, in addition to the CLID, for EuroISDN calls (this is automatically done by entering YES in response to the CLID prompt).

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	PARM	Change system parameters.
...		
- FCDR	NEW	Format for Call Detail Recording. Enter NEW for new format.
...		
- CLID	(NO) YES	Enter YES to include the TON and NPI fields in the CDR ticket, in addition to the CLID.
...		

EuroISDN Malicious Call Identification

LD 17 - Configure remote D-channel capability for EuroISDN interface for PRI and BRI.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Action Device and Number.
- ADAN	CHG DCH xx	Change D-channel.
...		
- IFC	EURO	EuroISDN interface for D-channel.
...		
RCAP	MCID	Add Malicious Call Identification as a new remote capability.

LD 16 - Configure remote capability for EuroISDN interface for PRI.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	RDB	Route Data Block.
...		
DTRK	YES	Digital Trunk Route.
- IFC	EURO	EuroISDN interface.
...		
RCAP	MCID	Add Malicious Call Identification as a new remote capability.

LD 16 - Configure remote capability for EuroISDN interface for BRI.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	RDB	Route Data Block.
...		
DTRK	YES	Digital Trunk Route.
...		
- DGTP	BRI	Basic Rate Interface Digital Trunk Type.
- IFC	EURO	EuroISDN interface.
RCAP	MCID	Add Malicious Call Identification as a new remote capability.

LD 15 - Modify system and software parameters.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	FTR	Customer Features and options.
...		
OPT	MCTA	Malicious Call Trace signal is allowed for attendants. MCTD = Malicious Call Trace is denied (default)
...		
MCDC	YES	Malicious Call DN/CLID printing allowed.

LD 10 - Configure analog (500/2500 type) sets.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	500	Telephone type.
TN	c u	Terminal Number.
...		
CLS	MCTA	Malicious Call Trace allowed. (MCTD) = Malicious Call Trace denied.

LD 11 - Configure Meridian 1 proprietary sets.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, 3000
TN	c u	Terminal Number.
...		
CLS	MCTA	Malicious Call Trace allowed. MCTD = Malicious Call Trace denied (default).
KEY	xx TRC	Trace key number.

LD 12 - Attendant Consoles.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	xxxx	Type of Attendant Console.
TN	c u	Terminal Number.
...		
CLS	MCTA	Malicious Call Trace allowed. MCTD = Malicious Call Trace denied (default).
KEY	xx TRC	Trace key number.

LD 57 - Configure Flexible Feature Codes for Analog (500/2500 type) sets.

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data
TYPE	FFC	Flexible Feature Code data block.
CUST	xx	Customer number.
...		
CODE	MTRC	Malicious Call Trace code
- MTRC	xxxx	Enter Flexible Feature Code for Malicious Call Trace.

LD 16 - Configure Malicious Call Trace Timer and Tandem Delay.

Note: This configuration is only required to handle Malicious Call Trace during call disconnection.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	RDB	Route Data Block.
...		
MCTS	YES	Malicious Call Trace Signal. (NO) = default.
- MCTM	(0) - 30	Malicious Call Trace Request Timer ID in seconds.
- MTND	YES	Malicious Call Trace disconnect delay for tandem calls on AXE-10 Australia and EuroISDN.

EuroISDN Trunk - Network Side

The following steps are required to configure the EuroISDN Trunk - Network Side feature:

For ISDN PRI access:

- In LD 17, for the network side EuroISDN Trunk - Network Side connectivity, configure the D-Channel for the network side EuroISDN ETSI protocol; and
- In LD 16, for the Bearer Capability-Based Routing capability, configure the route for the call type (voice, voice with 3.1 KHz audio, data, data with 3.1 KHz audio, or both voice and data with 3.1 KHz audio).

For ISDN BRI access:

- In LD 16, for the network side EuroISDN Trunk - Network Side connectivity, configure the route for the network side EuroISDN ETSI protocol.

For ISDN PRI access:

LD 17 — For the network side EuroISDN Trunk - Network Side connectivity, configure the D-Channel for the network side EuroISDN ETSI protocol.

Prompt	Response	Description
REQ	CHG	Change the existing data.
TYPE	ADAN	Action device and number.
- ADAN	CHG DCH x	Change a specified D-Channel. x=0-63.
- CTYP	MSDL	The card type to be used is the MSDL.
...		
- IFC	EURO	Interface type. Enter EURO for EuroISDN.
- - CNTY	NET	Country pertaining to EuroISDN interface. Enter NET for network side.
...		

For ISDN BRI access:

LD 16 — Configure the ISDN BRI link for the network side EuroISDN ETSI protocol.

Prompt	Response	Description
REQ	CHG	Change the existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route number.
...		
DTRK	YES	Digital trunk.
...		
- IFC	EURO	Interface type. Enter EURO for EuroISDN.
-- CNTY	NET	Country pertaining to EuroISDN interface. Enter NET for network side.
...		

LD 16 — For an ISDN or DPNSS1/DASS2 trunk, configure the route for the Bearer Capability-Based Routing call type.

Prompt	Response	Description
REQ	CHG	Change the existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route number.
TKTP		Supported trunk type.
	CO	Central Office trunk.
	DID	Direct Inward Dial trunk.
	TIE	TIE trunk.
	IDA	Integrated Digital Access trunk.
...		
DTRK	YES	Digital trunk.
...		
- DSEL		Data Selection.
	(VOD)	Route is for both voice and data
	VCE	Route is voice only
	DTA	Route is data only
	3VCE	Route is voice and 3.1 KHz
	3DTA	Route is data and 3.1 KHz
	TDN	Transparent Data Network

Flexible Numbering Plan

To configure the operation of the Flexible Numbering Plan feature, complete the following tasks.

To enable or disable Vacant Number Routing, respond to the following prompts in overlay 15.

VNR : This specifies that Vacant Number Routing is enabled or disabled. Respond to this prompt with YES to enable, or NO to disable.

RLI: This specifies the Route List Index to be used for Vacant Number Routing. Respond to this prompt with the index number, from 0 to 999.

CDPL: This specifies the (flexible) length of VNR CDP digits to be expected. Respond to this prompt with the expected digit length, from 0 to 10. CDPL should be set to the length of the longest number in use. (The default is 10.)

LOCL: This specifies the flexible length of VNR LOC digits to be expected (digit length from 0 to 10). LOCL should be set to the length of the longest number in use. (The default is 10.)

Note: The RLI, CDPL and LOCL prompts do not appear if VNR is set to NO.

NIT: This specifies the value of the Network Interdigit Timer. Respond to this prompt with the setting for the timer, from 2 to 8 seconds. (The default is 8.)

To configure routing, respond to the following prompts in overlay 86.

RLI: This specifies the Route List Index to be accessed. Respond to this prompt with the index number, from 0 to 999.

DMI: This specifies the Digit Manipulation Index to be used. Respond to this prompt with the index number, from 0 to 999.

FSNS: This specifies the Free Special Number Screening Index. Respond to this prompt with the index number, from 0 to 255. (The default index number is 0.)

AC1: This specifies Access Code 1. Enter the 1- to 4-digit network access code at this prompt.

AC2: This specifies Access Code 2. Enter the 1- to 4-digit network access code at this prompt.

Respond to the following prompts in overlay 87.

DMI: This specifies the Digit Manipulation Index. Respond to this prompt with the index number, from 0 to 999.

RLI: This specifies the Route List Index to be accessed. It must be set separately for the distant steering code and trunk steering code (under TYPE=DSC and TYPE=TSC respectively). Respond to this prompt with the index number, from 0 to 999.

FLEN: This specifies the length (flexible) of digits to be expected. Respond to this prompt with the expected digit length, from 0 to 16 for Trunk Steering Code, and from 0 to 10 for Distant Steering Code. (The default is 0.)

DSP: This specifies that either the Local Steering Code (LSC), Home Location Code (HLOC) or Directory Number (DN) is to be used for the Calling Station ID, in Group Dialing Plan calls. Respond to this prompt with either LSC, LOC or DN.

FSNS: This specifies the Free Special Number Screening Index (prompted under TYPE=FSNS). Respond to this prompt with the index number, from 1 to 255.

SPN: This specifies the special-number code to be screened. Respond to this prompt with the 1- to 11-digit code to be used.

XXX: This specifies whether routing codes are to be denied or allowed. Respond to this prompt with either DENY to deny these codes, or ALLOW to allow them.

DENY: This is prompted if the XXX prompt is set to DENY. Respond to it with the routing codes or range of routing codes to be denied.

ALLOW: This is prompted if the XXX prompt is set to ALLOW. Respond to it with the routing codes or range of routing codes to be allowed.

To configure translation-table data, respond to the following prompts in overlay 90.

RLI: This specifies the Route List Index to be used. Respond to this for each of TYPE=LOC, TYPE=NPA, TYPE=NXX, TYPE=SPN. Respond to this prompt with the index number, from 0 to 999.

FLEN: This specifies the length (flexible) of digits to be expected. Respond to this prompt with the expected digit length, from 0 to 16 for Special Number, and from 0 to 10 for Location Code. (The default is 0.)

Flexible Numbering Plan Enhancement

LD 15 – Enable/disable the Flexible Numbering Plan feature.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking data.
CUST	xx	Customer number.
...		
AC2	NPA NXX INTL SPN LOC	Access Code 2. E.164 National E.164 Subscriber International Special Number Location Code
FNP	YES	Enable the Flexible Numbering Plan feature (default).
ISDN	(NO) YES	ISDN option.
...		
VNR	(NO) YES	Vacant Number Routing enabled (disabled). VNR is only prompted when FNP = YES. When FNP = NO, VNR is automatically set to NO and is, therefore, restricted.
- RLI	0-999	Route List Index. Enter the route list, defined in LD 86, to be used by Vacant Number Routing.
- FLEN	1-(16)	Flexible length of digits expected.
- CDPL	1-(10)	Coordinated Dialing Plan Length. Enter the maximum number of Coordinated Dialing Plan (CDP) digits expected by Vacant Number Routing.
- LOCL	1-(10)	Location Code Length. Enter the maximum number of Location (LOC) digits expected by Vacant Number Routing.

Idle Extension Notification

In overlay 12, designate the Semi-Automatic Camp-On key. This key is also used with the Idle Extension Notification feature.

Prompt	Response	Description
KEY	xx SACP	Key number, Semi-Automatic Camp-On/Idle Extension Notification

Use overlay 15 (for customer data) or overlay 93 (for tenant data) to configure a new ICI key. When an extension that is under Idle Extension Notification supervision becomes idle, the recall is presented on this new ICI key at the attendant console.

Prompt	Response	Description
ICI	xx IEN	ICI number, Idle Extension Notification

Use overlay 16 to configure the Idle Extension Notification block timer.

Prompt	Response	Description
CNTL	YES	
TIMR	IENB 2-(5)-10	Idle Extension Notification block timer, in minutes. The default value is five minutes. Both SACP and NAS packages must be equipped.

Incoming Trunk Programmable Calling Line Identification

Use the following procedure to configure Incoming Trunk Programmable Calling Line Identification.

Step 1 - Use **Overlay 16** to configure the incoming route.

Prompt	Response	Description
REQ	NEW, or CHG	New, or Change.
TYPE	RDB	Route data block.
...		
BILN	(NO), YES	Billing number (is not) is required.
BLN	1-(10)-16	Billing number length. The default is 10 digits.
BNUM	x...x	Billing number (1 to 16 digits).
BDSP	(NO), YES	(Do not) display Billing Number.

Step 2 - Use **Overlay 16** to configure outgoing route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
...		
ISDN	(NO), YES	ISDN route must be YES.
...		
IFC	xxxx	Select the appropriate interface type for route (cannot be SL1 or IDA).
SBN	(NO), YES	(Do not) send billing number. Must be set to YES.

International 1.5/2.0 Mb/s Gateway

Use this procedure to configure International 1.5/2.0 Mb/s Gateway on an Option 11 system.

Pad and coding configuration

LD 14 – Select the pad category table and coding law for the 1.5 Mb/s PRI/DTI trunks used in the gateway.

Prompt	Response	Description
REQ	CHG	Change.
PDCA	0-16	pad category table. Enter 0 if no pad value is to be used.
PCML	M, A	coding law (Mμ- or A-law)

Pad configuration

LD 73 – Set the pad category values for Meridian Digital sets, for the 2 Mb/s PRI/DTI XPE Analog Public Exchange trunks, XPE Analog Tie trunks, and digital pads for trunk connections between 1.5 Mb/s PRI/DTI and 2 Mb/s PRI/DTI trunks.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	PRI, DTI	1.5 Mb/s PRI or DTI
DSET	x y	pad category value for the new Meridian Digital Set
PRI2	x y	pad category value for the 2 Mb/s PRI/DTI trunks
XUT	x y	pad category value for the XPE Analog Public Exchange trunks
XEM	x y	pad category value for the XPE Analog TIE trunks
PRI	x y	pad category value for the 1.5 Mb/s PRI/DTI trunks

Integrated Services Access (ISA)

Configuring ISA routes

Basic PRI configuration must be performed before Integrated Services Access (ISA) is defined (see “Overview” chapter). ISA routes and trunks must be defined to access Northern Telecom’s ISA functionality or AT&T’s Call-by-Call Service.

To configure ISA, take the following steps:

- 1 LD16 Route Data Block
Define the ISA master route, before other route types.
- 2 LD14 Trunk Data Block
Define the associated list of ISA trunks.
- 3 LD16 Route Data Block
Define all service routes.

Use LD16 to create an ISA master route.

Prompt	Response	Description
REQ	NEW,CHG, OUT	
TYPE	RDB	Route Data Block
CUST	0-31	Customer number
ROUT	0-511	Route number
TKTP	ISA	Create an ISA trunk route Note: Package 117, Call-By-Call Service, is required to define an ISA master route.
DTRK	YES	Digital trunk route
DGTP	PRI	Digital trunk type
ISDN	YES	ISDN option
MODE	PRA	D-channel mode controlling the route (ISA master route)
PNI	1-32700	Customer's Private ID
		- continued -

Use LD16 to create an ISA master route.

Prompt	Response	Description
IFC	aaaa	Interface type: (D100), ESS4, ESS5, SL1, S100, D250 Note: The IFC of an ISA master route and its associated service route must match.
NSF	(NO),YES	Network Service Facility (for TKTP = ISA and non-AT&T IFC. AT&T always has NSF.)
COTR	0-511	DID/Central Office route number Prompted if IFC = D100. Enter CO or DID route.
TIER	0-511	TIE route number Prompted if IFC = D100 and NSF = NO
WATR	0-511	WATS route number Prompted if IFC = D100 and NSF = YES
ICOG	IAO, ICT, OGT	Incoming and outgoing trunk, Incoming trunk, Outgoing trunk
SRCH	RRB	Round robin hunting for outgoing trunks
ACOD	xxxx	Trunk route access code

Use LD14 to configure ISA trunks

Prompt	Response	Description
REQ	NEW, CHG, MOV, OUT	
TYPE	ISA	ISA trunk type
TN	loop ch	Terminal number address—use loop number created in LD17
	0-159	PRI loop number
	1-24	PRI channel
CUST	0-31	Customer number
RTMB	0-511, 1-254 0-127, 1-254	Route and Member number for SL-1 NT, RT, XT and options 51, 61, 71, and 81. For all other machine types.
B-CHANNEL SIGNALING		
TGAR	(0)-31	Trunk Group Access Restriction
CLS	aaa	Class of service options

Use LD16 to configure ISA service routes (Part 1 of 2)

Prompt	Response	Description
REQ	NEW	Add an ISA service route
TYPE	RDB	Route data block
CUST	0-31	Customer number
ROUT	0-511	Route number
TKTP	aaaa	Types of service route allowed with ISDN
DTRK	YES	Digital trunk route
ISDN	YES	ISDN option
_MODE	PRA	PRA master route for ISA
IFC	aaaa	Interface type: (D100), ESS4, ESS5, SL1, S100, D250

Use LD16 to configure ISA service routes (Part 2 of 2)

Prompt	Response	Description
SRVC	(ACC)	Note: The IFC of an ISA master route and its associated service route must match. Service for AT&T ESS connections: NNSF, ACC, I800, LDS, M800, MEG, SDN, IWAT, WATM, WATB Prompted if IFC = ESS4 or ESS5 Note: NSF refers to the services provided on a Call-by-Call basis.
_SRPM	0-(9)	WATS band. Prompted only if SRVC = WATB.
ISAR	Yes, (No)	ISA service route
_RTN	0-511	Select route number of any configured ISA master route Prompted only when ISAR = YES.
_FACY	Yes, (No)	Facility for the call type Prompted when TKTP = TIE, ISAR = YES, and IFC = D100/D250/S100 TIE connection in the NSF IE Private connection in the NSF IE.
_SID	0-511	Service Identifier number.
_MIN	xx	Minimum number of channels reserved on the ISA master route
_MAX	xx	Max number of channels reserved on the ISA master route.
_PRIM	Yes, (No)	ISA route class of service
ICOG	IAO, ICT, OGT	Incoming and outgoing trunk, Incoming trunk, Outgoing trunk
ACOD	xxxx	Trunk route access code

The Listed Directory Number (LDN0) value must be set in LD15, Customer data block, in order to terminate ISDN/DID incoming calls, such as ISA.

Intercept Computer Dial from Directory

LD 15 – Enable Intercept Computer Dial from Directory.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB ICP_DATA	Customer data block. Release 21 gate opener.
...		
- ICP	(NO), YES	Intercept Computer.
...		
- ICPD	(0)-9	ICP Padding Digit
- ICTD	(NO), YES	Intercept Computer Treatment Dial from directory. This prompt allows an intercept attendant position to dial an extension DN from the Intercept Computer Terminal. It is only prompted if ICP is set to "YES".

ISDN PRI Central Office connectivity

This feature allows the interconnection of the Meridian 1 with public exchanges in the international markets that support the following protocols:

- AXE-10 Australia (non-Asia Pacific ISDN Connectivity)
- AXE-10 (Sweden)
- NEAX-61 (New Zealand) (non-Asia Pacific ISDN Connectivity)
- Numeris VN3 (France)
- SwissNet (Switzerland)
- SYS-12 (Norway)
- ITR6 (Germany)
- EuroISDN
- Japan D70 (non-Asia Pacific ISDN Connectivity)
- Asia-Pacific, consisting of:
 - Australia (private or alternative carrier)
 - China
 - Hong Kong
 - Indonesia
 - Japan
 - Malaysia
 - New Zealand
 - Singapore
 - Thailand

These implementation procedures for these connectivities are described in the sections which follow.

AXE-10 (Australia), non-Asia Pacific connectivity

LD 17 – Define system support for the AXE-10 Australia connectivity.

Prompt	Response	Description
REQ	CHG	Change existing data block.
TYPE	CFN	Configuration record.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15.
...		
- IFC	AXEA	Ericsson AXE-10 for Australia.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Configure the routes for the AXE-10 Australia connectivity.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number associated with this route.
ROUT	xx	Route number.
...		
IFC	AXEA	Ericsson AXE-10 for Australia.

AXE-10 (Sweden), non-Asia Pacific connectivity

This feature allows ISDN PRI connectivity between the Meridian 1 and the

LD 17 – Define the system support for the AXE-10 Sweden connectivity.

Prompt	Response	Description
REQ	CHG	Change existing data block.
TYPE	CFN	Configuration record.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15.
...		
- IFC	AXES	Ericsson AXE-10 for Sweden.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Configure the routes for the AXE-10 Sweden connectivity.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number associated with this route.
ROUT	xx	Route number.
...		
IFC	AXES	Ericsson AXE-10 for Sweden.

NEAX-61 (New Zealand), non-Asia Pacific connectivity

LD 17 – Configure an ISDN interface supporting the Telecom New Zealand ISDN protocol.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration data block.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15 (all other machine types).
- CTYP	MSDL	TCNZ requires the D-channel be defined on an MSDL.
- GRP	0-4	Network group number for the Option 81.
CDNO	1-10	Card number on the Option 11.
- DES	aaaaaa	Alphanumeric designator.
- DPNS	(NO) YES	Digital Private Network Signaling.
- USR	PRI	D-channel mode. This D-channel is used for Primary Rate only.
- IFC	TCNZ	Telecom New Zealand.
- DCHL	0-159 (0)-3	TCNZ loop and interface ID – non Option 11.
	1-10 (0)-3	TCNZ loop and interface ID – Option 11.
- PRI2	0-159 0-3	Secondary PRI2 loops for nB+D, plus sequence. Note that the D-channel is not necessarily on IFC ID 0; this is set by service change.
- OTBF	1-(32)-127	Number of output request buffers.
- CNEG	(1) 2	Options for outgoing Channel Negotiation. Option 1: Channel is non-negotiable. Option 2: The Channel listed is preferred, but negotiable.
- RCAP	aaa	Remote DCH capabilities, as applicable.
- OVLS	YES	Allow overlap sending.

- - OVLT	1-8, 0	Time the sending side has to wait between INFO messages. "0" means send immediately.
- TIMR	(NO) YES	Change protocol timer value.
- - T310	10-60	Timer used to determine how long the switch can wait for the response message when the QSIG outgoing call is in the outgoing call processing state.
- - INC_T306	0,(2),...,T306 (T306 is the duration of the T306 Network timer in seconds)	Variable timer for received DISCONNECT message on incoming calls, allowing in-band tone to be heard when sent by the network. The network will stop sending tone after T306 expires, so the maximum time will be T306. Entered in two-second increments. TCNZ interface: T306 = 30 sec.
- - OUT_T306	0,2,...,(T306) (T306 is the duration of the T306 Network timer in seconds)	Variable timer for received DISCONNECT message on outgoing calls, allowing in-band tone to be heard when sent by the network. The network will stop sending tone after T306 expires, so the maximum time will be T306. Entered in two-second increments. TCNZ interface: T306 = 30 sec.
- LAPD	(NO) YES	Change the Link Access Protocol for D-channel parameters.

LD 16 – Configure a COT, DID/DOD, or TIE route using the Telecom New Zealand (TCNZ) protocol.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...		
DGTP	PRI2	Type of digital route.
ISDN	YES	Default for a PRI2 route.
MODE	PRA	Primary Rate Access.
...		
IFC	TCNZ	Telecom New Zealand (NEAX-61).
...		
CTYP	UKWN, INTL, NPA, NXX	Only these call types are supported for TCNZ interface TIE routes.
...		
OPD	(YES) NO	Outpulsed digits in CDR.
CDRX	YES NO	X records produced on call transfer.
NDP	INC 1-32 EXC 1-32	Number of printed digits; output the first 1-32 digits. Suppress the last 1-32 digits. If REQ = NEW, output all digits and suppress none, if REQ = CHG, leave unchanged.
CDRY	(NO) YES	CDR Public Network Feature Invoke records will (will not) be generated when the feature is invoked. Default is NO.
OPA	(NO) YES	Generate CDR records for PPM pulses.
...		

MCTS	(NO) YES	Send a Malicious Call Trace request to the public network if MCT is invoked in the private network on current switch.
------	----------	---

Numeris VN3 (France)

LD 17 – Define system support for NUMERIS.

Prompt	Response	Description
REQ	CHG	Change existing data block.
TYPE	CFN	Configuration record.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15 (all other machine types).
...		
- IFC	NUME	Numeris for France.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Configure routes for NUMERIS.

Prompt	Response	Description
REQ	NEW, CHG	New, or change
TYPE	RDB	Route Data Block.
CUST	xx	Customer number associated with this route
ROUT	xx	Route number.
...		
IFC	NUME	Numeris for France

LD 73 – Define the alarm handler in the firmware, disable or enable the grade of service processing in the software, and define the number of seconds before the firmware sends an ERR message.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	PRI2	2.0 Mbit Primary Rate Interface data block.
...		
ALRM	REG	Regular firmware alarm handler (RAI transmission is controlled by software).
	ALT	Alternate firmware alarm handler (Immediate transmission of RAI by firmware).
...		
NOOS	(NO)	Grade of service feat.
	YES	Enables current grade of service feat.
		Alternate grade of service feat.
...		
RATS	1-(10)-15	The number of consecutive seconds the firmware has to check and validate error rate condition.

SwissNet 2 (Switzerland)

LD 17 – Define the ISDN PRI to SwissNet connectivity.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration Record.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15 (all other machine types).
...	...	...
- IFC	SWIS	Interface type for SwissNet connectivity.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Define the ISDN PRI to SwissNet connectivity.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RBD	Route Data Block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...	...	...
IFC	SWIS	Interface type for SwissNet connectivity.

SYS-12 (Norway)**LD 17** – Define the ISDN PRI to SYS-12 connectivity.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Type of data block.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15 (all other machine types).
...	...	...
- IFC	SS12	Interface type for SYS-12 connectivity.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Define the ISDN PRI to SYS-12 connectivity.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...	...	...
IFC	SS12	Interface type for SYS-12 connectivity.

1TR6 (Germany)

LD 17 – Define the ISDN PRI to 1TR6 connectivity.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
- ADAN	CHG DCH xx	Change a D-channel on logical port 0-15 (all other machine types).
...	...	...
- IFC	1TR6	Interface type for 1TR6 connectivity.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Define the ISDN PRI to 1TR6 connectivity.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	xx	Route number.
...	...	...
IFC	1TR6	Interface type for 1TR6 connectivity.

EuroISDN

LD 15 – Configure the Optional Sending of Forwarding CLID functionality (in response to the OCLI prompt).

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking data.
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network.
PNI	(0)-32700	Private Network Identifier.
...		
SATD	0-(1)-5	Satellite Delays.
OCLI	(NO)	NO = No manipulation is done on outgoing CLID for calls forwarded over EuroISDN links.
	EXT	EXT = The last forwarding DN is sent as CLID information for incoming calls over a standard ISDN (EuroISDN, APAC, NI-2) DID or CO link to a gateway Meridian 1 node, and redirected back over the standard ISDN (EuroISDN, APAC, NI-2) DID or CO link.
	ALL	ALL = The same as for EXT. Moreover, the last forwarding DN is sent as CLID information for internal calls from a local set or over ISDN TIE trunks, except for DPNSS1 calls which are redirected from a gateway node over a standard ISDN (EuroISDN, APAC, NI-2) DID or CO link. If the redirection does not occur at the gateway node, the redirecting information number, if present in the incoming SETUP message received at the gateway node from the private network, is sent as CLID.
....		

LD 17 – Create a new D-channel for the EuroISDN interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Action Device and Number.
- ADAN	NEW DCH x	New D-channel at port number x.
- CTYP	MSDL	Card type, where MSDL = Multipurpose Serial Data Link for Meridian Options 51C-81C, or Downloadable D-Channel Board for Option 11C.
CDNO	1-10	Card number on the Option 11.
- USR	PRI	D-channel for ISDN PRI only. Precede with X to remove.
- IFC		DCH interface type.
	EURO	EURO = EuroISDN
- - CNTY		Enter country pertaining to EuroISDN interface.
	AUS	Austria
	DEN	Denmark
	(ETSI)	ETS 300-102 basic protocol
	FIN	Finland
	GER	Germany
	ITA	Italy
	NOR	Norway
	POR	Portugal
	SWE	Sweden
	EIR	Ireland
	DUT	Holland
	SWI	Switzerland
	BEL	Belgium
	ESP	Spain
	UK	United Kingdom
	FRA	France
	CIS	Commonwealth of Independent States (Russia and the Ukraine).
PINX_CUST	xx	The customer number used for the DN address.
...		

DCHL	0-159	The PRI loop number for the D-Channel.
-- CNEG	(1) 2	Channel Negotiation option. (1) = Channel is indicated and no alternative is acceptable. This is the default value for all EuroISDN Interfaces except FRA. 2 = Channel is indicated and any alternative is acceptable. This is the default value for the FRA interface.
- RCAP	COLP XCOP	Enter COLP to support Connected Line Identification Presentation as a remote capability. This is the default value for the ESIG, ISIG, NI2, and EURO interfaces. Enter XCOP to remove Connect Line Identification Presentation as a remote capability. This is the default value for the APAC, AUS, EIR, DEUT, ESP, BEL, and FRA interfaces.

LD 16 – Configure new DID routes (the same responses to the IFC and CNTY prompts, as were used in LD 17, must be entered).

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change or delete existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0 - 511 0-127	Route Number. For Option 11C.
TKTP	DID COT	Trunk type. DID = Direct Inward Dialing COT = Central Office.
...		
DTRK	YES	Digital trunk route.
- DGTP	PRI2 BRI	Digital trunk type for route.
...		

- IFC	EURO	Interface type. EURO = EuroISDN.
-- CNTY	AUS DEN (ETSI) FIN GER ITA NOR POR SWE EIR DUT SWI BEL ESP UK FRA CIS	Enter country pertaining to EuroISDN and Asia Pacific interface type. Austria Denmark ETS 300-102 basic protocol Finland Germany Italy Norway Portugal Sweden Ireland Holland Switzerland Belgium Spain United Kingdom France Commonwealth of Independent States (Russia and the Ukraine).
ICOG	IAO OGT ICT	Incoming and Outgoing trunk. Outgoing trunk only. Incoming trunk only.
ACOD	x..x	Access code for this trunk route.

- CLID	OPT0	Prefix = 0, for North American dialing plan. This is the default value for ESIG and ISIG interfaces.
	OPT1	Prefix = 1, for international PFXs in CLID, any numbering type supported. This is the default value for all EuroISDN interfaces.
	OPT2	Prefix = 2, for international PFXs in CLID, CCITT numbering type supported: UKWN, INTL, NPA, and NXX. Default value for CO/DID routes for the Telecom New Zealand interface.
	OPT3	Prefix = 3, for international PFXs in CLID, only NXX number type supported. Default value for TIE routes for the Telecom New Zealand interface.
	OPT4	For international COs, if the call originates from a CO trunk type, add nothing. Otherwise, add PFX1 and PFX2. This is the default value for the Hong Kong, Singapore, and Thailand interfaces.
- PROG	OPT5	This is the same as OPT4, except it supports a maximum of 10 digits in the CLID. This is the default value for the Austrian interface.
	NCHG	Progress Signal.
	MALE	Send PROGRESS (default value for all interfaces, except Austria).
	MCON	Send ALERT after CALL PROCEEDING.
...		
- RCAP	COLP	Send CONNECT after CALL PROCEEDING (this is the default value for the Austrian interface).
	XCOL	Enter COLP to support Connected Line Identification Presentation as a remote capability. This is the default value for the ESIG, ISIG, NI2, and EURO interfaces.
...		Enter XCOL to remove Connect Line Identification Presentation as a remote capability. This is the default value for the APAC, AUS, EIR, DEUT, ESP, BEL, and FRA interfaces.

- CPFXS	(YES) NO	Customer-defined Prefixes option. This prompt is added as one of the sub-prompts of ISDN = YES. It is added at the end of the ISDN sub-prompts. If CPFXS = YES, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Customer Data Block via the PFX1 and PFX2 prompts in LD 15, as is currently done. This is the default response. If CPFXS = NO, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Route Data Block via the HNTN and HLCL prompts in LD 16.
- - HNTN	0-9999	Home National Number. This number is similar to the PFX1 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX1, the HNTN prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
HLCL	0-9999	Home Location Number. This number is similar to PFX2 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis as required in some countries (e.g., Italy). As is the case with PFX2, the HLCL prefix can be from one-to-four digits long. This prompt is displayed only if CPFXS = NO. If only a <CR> is entered, this prompt keeps its previous configuration. If no value was configured previously, no value will be configured. Enter X to delete the digits.
ADDP	(NO) YES	If ADDP = NO, the Calling or Connected Party Number displayed is not modified. If ADDP = YES, the prefixes 0 (national) or 00 (international) are added to the Calling Party Number if the Type of Number (TON) is public.

LD 17 – Configure the Numbering Plan Identification (NPI) and Type of Number (TON) fields to be included in the CDR tickets, in addition to the CLID, for EuroISDN calls (this is automatically done by entering YES in response to the CLID prompt).

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	PARM	Change system parameters.
...		
- FCDR	NEW	Format for Call Detail Recording. Enter NEW for new format.
...		
- CLID	(NO) YES	Enter YES to include the TON and NPI fields in the CDR ticket, in addition to the CLID.
...		

Japan D70, non-Asia Pacific connectivity

Feature administration

LD 17 – Define the ISDN PRI to D70 connectivity.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration record.
- ADAN	CHG DCH x	Change a D-channel on logical port 0-15 (all other machine types).
...	...	...
- IFC	D70	Interface type for Japan D70 connectivity.
- CNEG	(1) 2	The required channel negotiation option, either exclusive (the default) or preferred.

LD 16 – Define the ISDN PRI to D70 connectivity.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	xxx	Route number.
...	...	...
IFC	D70	Interface type for Japan D70 connectivity.

Asia Pacific ISDN PRI Central Office Connectivity

LD 15 — Configure the Customer Data Block for Asia Pacific with Calling Line Identification.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking data (if REQ = CHG only.)
CUST	xx	Customer number.
OPT	a...a	Options.
AC2	aaaa	Access Code 2 as defined in LD 86 (aaaa = NPA, NXX, INTL, SPN, or LOC).
...		
CLID	YES	Configure CLID option for Asia Pacific.
- SIZE	0-(256)-4000	The maximum number of CLID entries needed for a customer. It is advised that you not define a size much larger than actually needed. This entry may be increased or decreased as required.
- INTL	0-9999 X	Country code, for international number. Enter X to delete digits.

- ENTRY	aaaa Xaaaa Xaaaa Xbbbb	aaaa = CLID entry to be configured. Xaaaa = CLID entry to be deleted. Xaaaa Xbbbb = CLID entries to be deleted. aaaa and bbbb must be a value between 0 and (SIZE-1). The ENTRY prompt is repeated until <CR> is entered as a response. If REQ = CHG, as many entries as needed may be created, changed or deleted. The action for the entry is saved to system memory after the CLID entry has been completely configured. That is, after the LSC prompt has been answered. If a new CLID entry is created, or an existing CLID entry is changed, the message "ENTRY aaaa SAVED" is displayed after the LSC prompt. If a CLID entry or CLID entries is/are deleted, the message "ENTRY aaaa DELETED" or "ENTRIES aaaa-bbbb DELETED" is displayed after the LSC prompt.
-- HNTN	0-999999 X	National code for home national number (1-6 digits). X = delete digits.
-- HLCL	0-999..9 X	Local code for home local number or Listed Directory Number (1-12 digits). X = delete digits.
-- DIDN	(YES) NO SRCH	How to use the DN as a DID when constructing a CLID national or local number. YES = The CLID is constructed using the digits defined in HLCL followed by the DN of the active key (default). NO = Construct the CLID using the digits defined in HLCL. SRCH = Search on the set, from key 0 - upwards, to find a CLID entry which has the DIDN set to YES. Use the found CLID to construct the local number.
-- HLOC	0-9999999	Home location code (ESN), 1-7 digits.
-- LSC	0-9999999	Local steering code, 1-7 digits.
ISDN	YES	Integrated Services Digital Network.
- PNI	1-327000	Private Network Identifier.
ENTRY aaaa SAVED ENTRY aaaa DELETED ENTRIES aaaa-bbbb DELETED		Displayed message appears after each entry is input.

LD 17 – Configure the Asia Pacific D-channel.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CFN	Configuration data block.
- ADAN	NEW DCH xx	Add a D-channel on logical port 0-15.
- CTYP	MSDL	Card type where: MSDL = Multi-purpose Serial Data Link for Options 51C-81C. MSDL = Downloadable D-Channel Daughterboard for Option 11C.
- GRP	0-4	Network group number for Option 81/81C systems.
- DNUM	0-15	Device number for I/O ports. All ports on the MSDL card share the same DNUM. The MSDL card address settings must match the DNUM value.
- PORT	1	Port number.
- DES	aaa...a	Designator. DES is used to identify the link and can be up to 16 alphanumeric characters: 0-9, and upper case A-Z. Characters "*" and "#" are not allowed.
- USR	PRI	This D-channel is used for Primary Rate only.
- IFC	APAC	Asia Pacific ISDN interface for Australia, China, Hong Kong, Indonesia, Japan, Malaysia, Singapore, and Thailand.
- - CNTY	AUST CHNA HKNG INDO JAPN MSIA SING TCNZ THAI	Australia interface. China interface. Hong Kong interface. Indonesia interface. Japan interface. Malaysia interface. Singapore interface. New Zealand interface. Thailand interface.
- - ISDN_MCNT	60-(300)-350	Layer 3 call control message count per 5 second time interval.

- CLID	OPT4	OPT4 is the default for all Asia Pacific interface.
- PROG	NCHG	Progress signal. No Change. This is the default for all Asia Pacific interfaces except Japan and Australia.
	MALE	Alert message. This is the default for the Japan interface.
	MCON	Connect message. This is the default for the Australia interface.
- - DCHL	1-9	PRI/PRI2 loop number for D-channel (Option 11C).
	1-9 1-126	PRI loop number and interface identifier for the D-channel in Option 11C when CNTY = JAPN. When INBD package 255 is enabled values for both the PRI loop number (LOOP) and the D-channel interface identifier (ID) must be entered.
	1-9 (0) - 3	PRI loop number and interface identifier for the D-channel in Option 11C when CNTY = MSIA or TCNZ. When INBD package 255 is enabled values for both the PRI loop number (LOOP) and the D-channel interface identifier (ID) must be entered.
PRI	1-9 1-126	Secondary PRI loop number and interface identifier (prompted if INBD package 255 is enabled). The values entered must be different than those entered for the loop number and interface identifier at the DCHL prompt. Requested only if CNTY = JAPN.
PRI2	1-9 0-3	Secondary PRI loop and interface identifier (prompted if INBD package 255 is enabled). The values entered must be different than those entered for the loop number and interface identifier at the DCHL prompt. Requested only if CNTY = MSIA or TCNZ.
- CNEG	(1)	Channel negotiation option. Channel is indicated and no alternative acceptable, exclusive.
	2	Channel is indicated and any alternative acceptable, preferred.

- RLS	xx	Software release of the far end switch. If the far end has an incompatible release, it prevents the sending of application messages.
RCAP		Remote capabilities. Prompted for Indonesian interface only.
	(COLP)	Connected number Information Element Presentation supported.
	XCOL	To remove COLP.
...		
OVLR	YES	Allow Overlap Receiving. This prompt applies only if CNTY = THAI, MSIA, INDO, or CHNA.
- DIDD	(0)-15	Number of leading digits to delete from DID trunks.
- OVLS	YES	Allow Overlap Sending. This prompt does not apply if CNTY = JAPN.
- OVLT	(0)-8	Overlap Timer in seconds. This timer controls the interval between the sending of INFORMATION messages. "0," the default, means send immediately.
- TIMR	YES	Change programmable timers. Only supported for interfaces supporting one of the following timers.
-- T310	10-(30)-60	Maximum time in seconds between an incoming CALL PROCEEDING message and the next incoming message. Not supported for Australia. Default values are as follows: CHNA = 30 seconds. HKNG = 10 seconds. INDO = 10 seconds. JAPN = 10 seconds. MSIA = 10 seconds. SING = 10 seconds. TCNZ = 10 seconds. THAI = 10 seconds.

-- INC_T306	0-(2)-T306	Variable timer for received DISCONNECT message on incoming calls allowing in-band tone to be heard when the network sends in-band tone. T306 is the duration of the network timer in seconds. The network will stop sending after T306 times out, so the maximum time will be T306. The value is stored in two-second increments, which are rounded up. T306 can be defined up to 30 seconds for all APAC interfaces except for Australia which can have T306 defined up to 60 seconds.
-- OUT_T306	0-(30)-T306	Variable timer for received DISCONNECT message on outgoing calls allowing in-band tone to be heard when the network sends in-band tone. T306 is the duration of the network timer in seconds. The network will stop sending after T306 times out, so the maximum time will be T306. The value is stored in two-second increments, which are rounded up. T306 can be defined up to 30 seconds for all APAC interfaces except for Australia which can have T306 defined up to 60 seconds.
- LAPD	YES	Allows the changing of the layer 2 timer. NO = Do not allow the changing of the layer 2 timer (default).
...		
PARM	YES	Change system parameters.
FCDR	NEW	Use new CDR format (recommended for Japan).
OCAC	YES	Support the Original Carrier Access Code format. NO = Do not support the Original Carrier Access Code format (default).
MTRO	(MR) PPM	Message Registration (default). Periodic Pulse Metering.

LD 16 – Configure Asia Pacific ISDN PRI Route Data Block.

Prompt	Response	Description
REQ	NEW	Add new data.
	CHG	Change existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route number.
TKTP	TIE	TIE trunk type.
	COT	Central Office Trunk type.
	DID	Direct Inward Dialing trunk type.
...		
DTRK	YES	Digital trunk route.
- DGTP	PRI	PRI digital trunk type for HKNG and JAPN.
	PRI2	PRI digital trunk type for AUST, SING, THAI, TCNZ, INDO, CHNA and MSIA.
...		
ISDN	YES	Integrated Services Digital Network.
- MODE	PRA	ISDN PRI route.
- IFC	APAC	Asia Pacific ISDN interface for Australia, China, Hong Kong, Indonesia, Japan, Malaysia, Singapore, and Thailand.
- - CNTY	AUST	Australia interface.
	CHNA	China interface.
	HKNG	Hong Kong interface.
	INDO	Indonesia interface.
	JAPN	Japan interface.
	MSIA	Malaysia interface.
	SING	Singapore interface.
	TCNZ	New Zealand interface.
	THAI	Thailand interface.
...		

CPFXS	NO	Customer-defined Prefixes option. If CPFXS = NO, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Route Data Block via the HNTN and HLCL prompts which follow. Enter NO for APAC.
	(YES)	If CPFXS = YES, when constructing the Calling or Connected Line Identification, the prefixes are retrieved from the Customer Data Block via the HNTN and HLCL prompts in LD 15, as is currently done. This is the default response.
HNTN	0-9999	This prompt applies to APAC only if CPFXS = NO. Home National Number. This number is similar to the PFX1 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis. As is the case with PFX1, the HNTN prefix can be from one-to-four digits long.
HLCL	0-9999	This prompt applies to APAC only if CPFXS = NO. Home Location Number. This number is similar to the PFX2 number prompted in LD 15. It is added to this overlay so that this prefix can be configured on a route basis. As is the case with PFX2, the HLCL prefix can be from one-to-four digits in length.
...		
CDR	YES	Call Detail Recording if the AOC display is desired in the call record.
-- OTL	YES	CDR on outgoing toll calls.
-- OAN	YES	CDR on all answered outgoing calls.
...		
MR	ENDC	AOC at end of call.
RUCS	1	Route unit cost - value received is treated as charged.
RUCF	1 0	Route unit conversion factor - no conversion required.
...		

MCTS	YES	Enable Malicious Call Trace signaling for AUST or TCNZ.
- MCTM	(0)-30	Malicious Call Trace request timer is defined in seconds. This is the disconnection delay which is used. It overrides T306 for calls to/from Malicious Call Trace capable sets (Australia only).
- MTND	(NO) YES	Malicious Call Trace disconnect delay for tandem calls (Australia only).

LD 14 – Configure Asia Pacific ISDN PRI trunks.

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data.
TYPE	TIE COT DID	TIE trunk data block. Central Office Trunk data block. Direct Inward Dialing trunk data block. Note: Must match TKTP defined in LD 16.
TN	c u	Card and unit.
CUST	xx	Customer number.
RTMB	0-127 1-254	Route number and member number.
TGAR	0 - (1) - 31	Trunk Group Access Restriction The default of 1 automatically blocks direct access.

LD 73 – Define the frame format and grade of service timers for a PRI2 loop.

Note: The following step assumes that the PRI2 loop has already been defined.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	PRI2	PRI2 loop.
FEAT	LPTI	Set the timers for PRI2 loop.
LOOP	xxx	PRI2 loop number.
MFF	(AFF) CRC	Alternate frame format (default). CRC-4 frame format.
ACRC	(NO) YES	NO = No automatic reporting of CRC-4 errors during transmission. Automatic reporting of CRC-4 errors during transmission.
ALRM	(REG) ALT	Regular mode of firmware alarm version (default). Alternate mode of firmware alarm version.
RAIE	(NO) YES	Disable RAIE Group II alarm state (default). Enable RAIE Group II alarm state.
...		
PERS	0-(100)-256	Persistence timer for Group II problems (2 ms increments).
CLEA	0-(100)-256	Clearance timer for Group II problems (2 ms increments).

ISDN Calling Line Identification enhancements

LD 15 — Construct the CLID entry for a customer.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change or delete existing data.
TYPE:	NET	Networking data (if REQ = CHG only.)
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network.
- PNI	1-327000	Private Network Identifier.
- CLID	(NO) YES	CLID option. YES = configure a CLID table for the customer. NO = (the default) do not configure a CLID table. In this case, the remaining prompts are not generated, and no CLID is sent for the customer.
- - SIZE	0-(256)-4000	The maximum number of CLID entries needed for a customer. If REQ = NEW, you may select the default value (256) by entering <CR> in response to this prompt. It is advised that you not define a size much larger than actually needed. This entry may be increased or decreased as required.
- - INTL	0-9999 X	Country code, for international number. Enter X to delete digits.

-- ENTRY	aaaa Xaaaa Xaaaa Xbbbb <CR>	aaaa = CLID entry to be configured. Xaaaa = CLID entry to be deleted. Xaaaa Xbbbb = CLID entries to be deleted. aaaa and bbbb must be a value between 0 and (SIZE-1). The ENTRY prompt is repeated until <CR> is entered as a response. If REQ = NEW, only one new entry may be created. The entry will be saved to system memory when the configuration for the entire overlay is completed. If REQ = CHG, as many entries as needed may be created, changed or deleted. The action for the entry will be saved to system memory after the CLID entry has been completely configured, that is, after the LSC prompt has been answered. If a new CLID entry is created, or an existing CLID entry is changed, the message "ENTRY aaaa SAVED" is displayed after the LSC prompt. If a CLID entry or CLID entries is/are deleted, the message "ENTRY aaaa DELETED" or "ENTRIES aaaa-bbbb DELETED" is displayed after the LSC prompt.
--- HNTN	0-999999 X	National code for home national number (1-6 digits). X = delete digits.
--- HLCL	0-999..9 X	Local code for home local number or Listed Directory Number (1-12 digits). X = delete digits.
--- DIDN	(YES) NO SRCH	How to use the DN as a DID when constructing a CLID national or local number. YES = The default. The CLID is constructed using the digits defined in HLCL followed by the DN of the active key. NO = Construct the CLID using the digits defined in HLCL. SRCH = Search on the set, from key 0 - upwards, to find a CLID entry which has the DIDN set to YES. Use the found CLID to construct the local number.
--- HLOC	0-9999999 X	Home location code (ESN), 1-7 digits. X = delete digits.
--- LSC	0-9999999 X	Local steering code, 1-7 digits. X = delete digits.
ENTRY aaaa SAVED ENTRY aaaa DELETED ENTRIES aaaa-bbbb DELETED		Displayed message. Refer to Note 3 for the ENTRY prompt.

It is advised that after the CLID table has been built in LD 15, a printout be generated, using LD 21, to verify the table entries defined in LD 15.

LD 21 — Print the CLID table for a customer.

Prompt	Response	Description
REQ:	PRT	Print the customer data block.
TYPE:	CLID	CLID entry data.
CUST	xx	Customer number.
SIZE	0-4000	The value that was defined for SIZE in LD 15 is printed automatically after the customer number has been entered.
RNGE	aaaa aaaa bbbb <CR>	CLID entry to be printed. Range of CLID entries to be printed (from aaaaa to bbbbb), aaaa and bbbb must be between 0 and the value defined for SIZE-1 in LD 15. Printing begins when <CR> is entered.
INTL	0-9999	Country code, for international number, is printed.
ENTRY	aaaa	CLID entry number in CLID table is printed. If a range of entries is entered in the RNGE prompt, all of the entries in the specified range are printed in sequence.
- HNTN	0-999999	National code for home national number, 1-6 digits, is printed.
- HLCL	0-999..9	Local code for home local number or Listed Directory Number, 1-12 digits, is printed.
- DIDN	YES NO SRCH	The desired choice of how to use the DN as a DID, when constructing a CLID national or local number, will be printed.
- HLOC	0-9999999	Home location code (ESN), 1-7 digits, is printed
- LSC	0-9999999	Local steering code, 1-7 digits, is printed.
...		

LD 10 — Define the CLID entry for analog (500/2500 type) sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE:	500	500 set.
TN	c u	Terminal Number.
...		
DIG	xx yy	Dial Intercom group number and member number.
DN	xxxx (0)-N	DN and CLID entry. N = CLID SIZE-1 (SIZE defined in LD 15).
...		

LD 11 — Define the CLID entry for DN keys for Meridian 1 proprietary sets.

Note: When assigning a CLID entry to an ACD set, you cannot use the same position ID already on the set. The set must be first outted, or the ACD key must be nulled and then rebuilt with the table entry number.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE:	xxxx	Type of telephone set.
TN	c u	Terminal Number.
...		

KEY	xx MCN yyyy (0)-N/D xx MCR yyyy (0)-N/D xx PVN yyyy (0)-N/D xx PVR yyyy (0)-N/D xx SCN yyyy (0)-N/D xx SCR yyyy (0)-N/D	Telephone function key assignments. xx = key number. MCN = Multiple Call Non-ringing key. MCR = Multiple Call Ringing key. PVN = Private Line Non-Ringing key PVR = Private Line Ringing key SCN = Single Call Non-ringing key. SCR = Single Call Ringing key. yyyy = DN. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.
KEY	xx HOT D dd yyy...y zzzz m (0)-N/D	Two-way Hotline Direct key, where: xx = key number. dd = number of digits dialed. yyy...y = target number (terminating DN, maximum of 31 digits). zzzz = two-way hotline DN. m = one of the following Terminating Modes: H = Hotline (default) N = Non-ringing R = Ringing V = Voice (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.

KEY	xx HOT L bbb zzzz (0)-N/D	Two-way Hotline List key, where: xx = key number. bbb = Hot Line List entry (0-999). zzzz = two-way hotline DN. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.
KEY	xx ACD aaaa 0-N/D bbbb	ACD key, where: xx = key number. aaaa = ACD DN or Message Center DN. 0-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key. bbbb = ACD agent's position ID. Please refer to the note at the top of the overlay table, on page 1032, that pertains to assigning a CLID entry to an ACD set.
...		

LD 27 — Define the CLID entry for ISDN BRI sets.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	TSP	Administer the Terminal Service Profile on the Digital Subscriber Loop.
...		
- SPID	xxxxxxx	Service Profile Identifier.
DN	xxxx (0)-N	xxxx = DN to be associated with the TSP. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15).

ISDN Signaling Link

Configuring ISL

To configure ISL, perform the following steps:

- 1** LD17 Configuration Record
Configure the D-channel for ISL use.
X11 RELEASE 17 AND EARLIER
- OR*
- 2** LD17 Configuration Record
Configure the D-channel for ISL use.
X11 RELEASE 18 AND LATER
- 3** LD15 Customer Data Block
Define a PRI customer
- 4** LD16 Route Data Block
Enable the ISL option on a per route basis
- 5** LD 14
Assign a D-channel for each route

LD 17 – Configure the D-Channel for ISL (X11 Release 17 and earlier).

Prompt	Response	Description
REQ	CHG	
TYPE	CFN	Configuration record
...		
PAM		
ISDN	YES, (NO)	
DCHI	1-15	DCHI port number (remove with Xnn)—only odd numbers allowed
BCHI	1-15	Back-up DCHI port number
USR		Change DCHI parameters
	PRA	D-channel for ISDN PRI only
	ISLD	D-channel for ISL in “dedicated” mode
	SHA	D-channel for ISL in “shared” mode, used for both ISDN PRI and
		Note 1: One of the above responses is mandatory and there is no default.
		Note 2: Package 147, ISDN Signaling Link, is required.
DCHL	0-159	PRI loop for DCHI, not prompted with D-channel in dedicated mode (D-channel does not require a channel on the PRI)
BCHL	0-159	PRI loop number for BCHI
OTBF	1-(16)-127	Number of output request buffers—use default (16)
DRAT		D-channel transmission rate
	56K	56 Kbps, default when LCMT (LD17) is AMI
	64KC	64 Kbps clear, default when LCMT (LD17) is B8S
	64KI	64 Kbps inverted HDLC (64 Kbps restricted)

PRI	loop ID	In X11 release 15 and later DRAT is not prompted when configuring ISL D-channels because the speed is controlled by the modem baud rate
ISLM	1-382	Not prompted if the D-channel is in dedicated mode (the D-channel does not require a channel on the PRI card)
CLOCK	(EXT), INT	Number of ISL trunks controlled by the D-channel (no default value)
		D-channel clock type
		EXT = Source of primary clock is external to DCHI card. Normally, EXT is used with PRI/ISL.
		INT = Source of primary clock is internal to DCHI card. INT is used only during DCHI loop back testing, where one side is set to INT, the other side is set to EXT.

LD 17 – Configure the D-Channel for ISL (X11 Release 18 and later).

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW DCH 0-63	Add a primary D-channel (can also CHG and OUT DCH)
CTYP	DCHI, MSDL	Card type where: MSDL = Downloadable D-channel daughterboard.
DNUM	0-15	Device number: physical port (odd) for D-channel on DCH, physical card address for MSDL
- PORT	0-3	Port number on MSDL card
USR	PRI, ISLD, SHA	D-channel mode
- ISLM	1-382	Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...159	PRI loop number for DCHI
OTBF	1-(32)-127	Number of output request buffers
- BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)

- PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
PRI	0-159 2-15	Additional PRI loops using the same D-channel, and interface ID
DRAT	(56K), 64KC, 64KI	D-channel transmission
IFC	aaa	Interface type: (D100), D250, ESS4, ESS5, SL1, S100
SIDE	NET, (USR)	Meridian 1 node type
RLS	xx	Release ID of the switch at the far end of the D-Channel
RCAP	aaa	Remote D-channel capabilities: MSL, NCT, ND1, ND2, RVQ
- CLOK	INT, (EXT)	Internal or external clock on ISL D-channels
LAPD	Yes, (No)	D-channel LAPD parameters
- T23	1-(20)-31	Interface guard timer (DCHI only)
- T200	2-(3)-40	Retransmission timer
- N200	1-(3)-8	Maximum number of retransmissions
- N201	4-(260)	Maximum number of octets in information field
- T203	2-(10)-40	Maximum time (in seconds) without frames being exchanged
- K	1-(7)	Maximum number of outstanding frames
ADAN	NEW BDCH 0-63	Add a backup D-channel
PDCH	0-63	Primary D-channel
CTYP	DCHI, MSDL	Card type where: MSDL = Downloadable D-channel daughterboard.

DNUM	0-15	Physical port (odd) for D-channel, card number for MSDL
- PORT	0-3	Port number on MSDL card
BCHL	0,2,4...,-159	PRI loop number for back-up D-channel
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>,***	Go on to next prompt or exit overlay

LD 15 – Define a PRI customer and networking data.

Prompt	Response	Description
REQ	NEW, CHG	Add or change a customer
TYPE	CDB NET_DATA	Customer data block Networking Data (Release 21 gate opener)
CUST	0-31	Customer number
...		
- ISDN	YES	ISDN
- PNI	1-32700	Private Network Identifier (for CLID)
- PFX1	xxxx	Prefix (area) code for International PRA (for CLID)
- PFX2	xxxx	Central Office Prefix for IPRA (for CLID)
- HNP	100-319	Home Number Plan Area code (for CLID)
- HNXX	100-319	Prefix for Central Office (for CLID)
- HLOC	100-3199	Home Location Code (ESN) (for CLID)
- LSC	xxxx	Local steering code (for CLID)
- CNTP	LDN, (PDN)	Default for Calling Line ID (CLID)
- RCNT	0-(5)	Maximum inter-node hops in a network redirection call

LD 16 – Enable ISL on a per route basis.

Prompt	Response	Description
REQ	NEW	Add a PRI trunk route
TYPE	RDB	Type of data
CUST	0-31	Customer number
ROUT	0-511	Route number
TKTP	ISL	Trunk route type:
ESN	Yes, (No)	ESN signaling
BRIP	Yes, (No)	ISDN BRI packet handler route
ISDN	Yes, (No)	ISDN PRI option
- MODE	ISLD	Mode of D-Channel that controls the route
- DCHI	1-15	DCHI port number Prompted if Mode = ISLD
- PNI	0-32700	Customer Private ID (unique to a customer)
- IFC	SL1	Interface machine type for this PRI route
- NCNA	Yes	Network call name allowed
- NCRD	Yes	Network Call Redirection
- TRO	(No), Yes	Trunk optimization allowed (denied) on the route
- NSF	(No), Yes	Network Service Facility
- TIER	0-511	Incoming Tie route number
- CHTY	ABCH, (BCH)	Signaling type for B-channel digital routes
- CTYP	aaa	Call type for outgoing direct dialed Tie route
- INAC	Yes, (No)	Insert ESN access code to incoming private network call
- NCOS	(0)-99	Network Call Of Service
- CLS	aaa	Class of service restriction for tie route
- TGAR	0-31	Trunk group access restrictions

- IEC	000-319	Interexchange carrier ID
PTYP	aaa	Port type at far end
ICOG	IAO, ICT, OGT	Incoming and/or outgoing trunk
SIGO	aaa	Signaling arrangement
NEDC	ORG, ETH	Near end disconnect control
FEDC	ETH, FEC, JNT,(ORG)	Far end disconnect control
CPDC	Yes, (No)	Meridian 1 is the only controlling party on incoming calls
DLTN	Yes, (No)	Provide dial tone to the far-end
PSEL	TLNK, (DMDM)	T-link or DM-DM protocol selection
EQAR	Yes, (No)	Enable Equal Access on this route
- GCR	(Yes), No	Use General Carrier Restriction for Equal Access calls
- NTOL	ALLOW, (DENY)	Allow or deny North American toll calls (1+ calls)
- ITOL	ALLOW, (DENY)	Allow or deny international toll calls (011+ calls)
- SCR	Yes, (No)	Use Selective Carrier Restriction for Equal Access calls
AUTH	Yes, (No)	Authcode to be prompted for incoming tie callers

LD 14 – Assign a channel identification to each trunk with the ISL option.

Prompt	Response	Description
REQ	NEW	
TYPE	TIE	Trunk type allowed
TN	loop ch	Use loop number created in LD17
RTMB	0-511 1-254	The route defined as an ISA route in LD16
CHID	1-382	Channel identifier for ISL channels (remove with Xnn)—must be coordinated with far end (no default value)

ISDN QSIG/EuroISDN Call Completion

LD 17— Configure Remote Capabilities to Call Completion for QSIG or EuroISDN on Primary Rate Interface.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Configuration Record.
- ADAN	CHG DCH x	Change D-channel.
...		
- IFC	xxxx	Interface type for route where xxxx is: ESGF = Interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO QSIG with GF capability. EURO = Interface ID for EuroISDN.
- - CNTY	xxx	Country. Prompted only when IFC = EURO. Where xxx is: ETSI = ETS 300 102 basic protocol (default). GER = Germany. DEN = Denmark. NET = Master Mode. SWI = Switzerland.
...		
- RCAP	CCBS	Add Call Completion to Busy Subscriber as remote capability.
- RCAP	CCNR	Add Call Completion No Response. This prompt is only applicable to QSIG interfaces.

LD 16 – Configure Remote Capability to Call Completion QSIG or EuroISDN on Basic Rate Interface.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route Data Block.
...		
DTRK	YES	Digital Trunk Route.
- DGTP	BRI	Basic Rate Interface. Allowed if TKTP = TIE, COT, or DID.
...		
- IFC	xxxx	Interface type for route where xxxx is: ESGF = Interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO QSIG with GF capability. EURO = Interface ID for EuroISDN.
- - CNTY	xxx	Country. Prompted only when IFC = EURO. Where xxx is: ETSI = ETS 300 102 basic protocol (default). GER = Germany. DEN = Denmark. NET = Master Mode. SWI = Switzerland.
...		
- RCAP	CCBS	Add Call Completion to Busy Subscriber as a remote capability. The response XCCBS removes this capability.
- RCAP	CCNR	Add Call Completion No Response as a remote capability. This prompt is only applicable to QSIG interfaces.

LD 10 – Add or Change Ring Again on Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ:	CHG, NEW	Change, or Add.
TYPE:	500	Telephone type.
TN	c u	Terminal Number.
...		
CLS	XRA	Ring Again allowed. XRD = Ring Again denied (default).

LD 11 – Add or Change Ring Again on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ:	CHG, NEW	Change, or Add.
TYPE:	aaaa	Telephone type where aaaa = SL1, 2006, 2008, 2009, 2016, 1018, 2112, 2216 2317, 2616 or 3000.
TN	c u	Terminal Number.
...		
KEY	xx RGA	Assign Ring Again key where xx = key number. On M2317 and M3000 telephones xx = 27.

LD 57 – Define Ring Again Flexible Feature Codes (FFCs) and FFC Confirmation Tone.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Code.
CUST	xx	Customer number.
FFCT	YES	Confirmation tone provided after FFC is activated. NO = Confirmation tone not provided.
CODE	RGAA	Ring Again activate.
RGAA	xx	Ring Again code.
CODE	RGAD	Ring Again deactivate.
RGAD	xx	Ring Again deactivation code.
CODE	RGAV	Ring Again verification.
RGAV	xx	Ring Again verification code.

LD 15 – Configure a Private Integrated Services Network Exchange (PINX) DN.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	NET	Networking.
CUST	xx	Customer number.
- PINX_DN	xx...x	Node DN to a maximum of seven digits with DN extension.

ISDN QSIG Basic Call

ISDN PRI implementation

LD 16 – Configure Automatic Trunk Maintenance in Route Data Block.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
...		
DGTP	PRI PRI2 BRI	1.5 Mbit DTI. 2.0 Mbit DTI. Basic Rate Interface.
IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform. The ESIG and ISIG prompt can be entered if both QSIG and QSIGGF packages are included.

LD 17 – Configuration Record.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	
ADAN	aaa aaa x	Add, Move or Change Input/Output Device
...		
- IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform.
PINX_CUST	xx	Customer number.
ISDN_MCNT	60-(300)-350	Layer 3 call control message count five per second time interval.

ISDN BRI implementation**LD 27** - Configure DSL for ISDN BRI trunk configuration.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	DSL	Digital Subscriber Loop.
DSL	c dsl#	Card and DSL Number.
APPL	BRIE	Basic Rate Trunk Application.
ISDN_MCNT	20-(300)-350	Layer 3 call control message count five per second time interval.
CUST	xx	Customer number.
...		

ISDN QSIG Call Diversion Notification

The QSIG Call Diversion Notification feature requires the configuration of one of the following call redirection features: Call Forward All Calls, Call Forward/Hunt Override Via Flexible Feature Codes, Call Forward Remote (Attendant and Networkwide), Call Forward No Answer/Flexible Call Forward No Answer, Call Forward No Answer Second Level, Call Forward Internal Calls and User Selectable Call Redirection. The implementation of these features is not modified.

Remote Capability Meanings

Table 19 indicates the remote capabilities meanings for both D-channel and BRI routes. When using Table 19 consider the following:

- Only nodes subject to be Originating, Served, Diverted or Rerouting nodes with respect to QSIG Call Diversion Notification need to have diversion remote capability configured. Transmit nodes pass the information transparently.
- When choosing the Operation Coding Choice, the interface type should be considered. When the QSIG interface used is ISO (IFC ISGF), operations are mostly coded with Integer Values. For ETSI interfaces (IFC ESGF), the operation coding depends on the standard version: the last ones are likely to use Integer Values, whereas some older ones may use Object Identifiers.

Only one remote capability allows the QSIG Diversion configuration on a D-channel/BRI route. This remote capability gathers the three following possibilities for the D-channel/BRI route:

- 1 coding of operations is sent to the remote switch, which can be coded as either as Object Identifier or as Integer Value. If coded as Object Identifier, the remote capability ends with an 'O', whereas for Integer Value, the remote capability ends with an 'I'. This means that remote capabilities explained below in 2 and 3 are defined twice.
- 2 sending of QSIG Diversion Notification Information to the remote switch: this information is sent only if the remote capability is of first or third type, i.e. DV1x or DV3x, where the x is either 'I' or 'O' as explained in 1.

- 3 treatment of Rerouting requests received from the remote switch: a rerouting request is only processed if the remote capability is of second or third type, i.e. DV2x or DV3x, where x is either 'T' or 'O' as explained above in 1.

Table 19
Remote Capability Meanings

Remote capability	Meaning for Operation Coding	Meaning for Notification Information	Meaning for Rerouting request
None of the following remote capabilities.	Not applicable (nothing sent)	Not <u>sent</u>	Not processed when <u>received</u>
DV1O	<u>Sent</u> coded as Object Identifier	<u>Sent</u>	Not processed when <u>received</u>
DV1I	<u>Sent</u> coded as Integer Value		
DV2O	<u>Sent</u> coded as Object Identifier	Not <u>Sent</u>	Processed when <u>received</u>
DV2I	<u>Sent</u> coded as Integer Value		
DV3O	<u>Sent</u> coded as Object Identifier	<u>Sent</u>	Processed when <u>received</u>
DV3I	<u>Sent</u> coded as Integer Value		

LD 17 – Configure or remove remote capabilities D-channel for QSIG Call Diversion Notification.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	ADAN	Action device and number.
ADAN	CHG DCH x	Configure new remote capabilities on D-channel x.
...		
IFC	xxxx	QSIG interface type where xxxx is: ESGF = interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO with GF capability.
...		
RLS	23	Release 23 and later.
...		
RCAP		QSIG SS Call Diversion Notification remote capability. Configure sending of QSIG Diversion Notification Information, treatment of Rerouting request and coding of operations. If coded as Object Identifier, the remote capability ends with 'O', whereas for Integer Value, the remote capability ends with 'I'. Only one remote capability is allowed. Refer to Table 1 for further information.
	DV1I	Diversion information is sent to remote switch.
	DV1O	Diversion information is sent to remote switch.
	DV2I	Rerouting requests from remote switch are processed.
		Rerouting requests from remote switch are processed.
	DV2O	Diversion information is sent to remote switch. Rerouting requests from remote switch are processed.
		Diversion information is sent to remote switch.
	DV3I	Diversion information is sent to remote switch.
	DV3O	Rerouting requests from remote switch are processed.
		Precede with 'X' to remove capability.

LD 16 – Configure Remote Capability for a route with QSIG Generic Functional Interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
...		
IFC	xxxx	QSIG interface type where xxxx is: ESGF = interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO with GF capability.
...		
RCAP		QSIG SS Call Diversion Notification remote capability. Configure sending of QSIG Diversion Notification Information, treatment of Rerouting request and coding of operations. If coded as Object Identifier, the remote capability ends with 'O', whereas for Integer Value, the remote capability ends with 'I'. Only one remote capability is allowed. Refer to Table 1 for further information.
	DV1I	Diversion information is sent to remote switch.
	DV1O	Diversion information is sent to remote switch.
	DV2I	Rerouting requests from remote switch are processed.
	DV2O	Rerouting requests from remote switch are processed.
	DV3I	Diversion information is sent to remote switch.
	DV3O	Rerouting requests from remote switch are processed.
		Precede with 'X' to remove capability.

LD 10 – Configure QSIG Diversion Notification on analog (500/2500 type) telephones

Prompt	Response	Description
REQ:	NEW CHG	Add new data. Change existing data.
TYPE:	500	Telephone type.
...		
TN	c u	Terminal Number.
...		
DN	x...x yyy	Directory Number and Calling Line Identification entry (Range is (0) - value entered for SIZE prompt in LD 15 minus one).
...		
- CPND	aaa	Calling Party Name Display where: NEW = Add data block. CHG = Change existing data block. OUT = Remove existing data block.
--CPND_LANG	aaa	Calling Party Name Display Language where: (ROM) = Roman. KAT = Katakana.
-- NAME	aaaa bbbb	Calling Party Name Display Name where: First name Last name.
...		
CLS	(DNO3) DNO1 DNO2	QSIG Call Diversion Notification options for calling party. Notification with diverted-to party's number and name. No notification. Notification without diverted-to party's number and name.

	(DNDY) DNDN	QSIG Call Diversion Notification options concerning forwarded- to party. Notification with Called party's number and name. Notification without Called party's number and name.
	CNDA	Call Party Name Display Allowed
	CFXA	Call Forward to External DN Allowed.
	CFTA	Call Forward by Call Type Allowed.
	DDGA	Directory Number Display on other set Allowed.
	FNA	Call Forward No Answer Allowed.
	HTA	Hunting Allowed.
	NAMA	Name Display on other set Allowed or (Denied).

LD 11– Configure QSIG Diversion Notification on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ:	NEW CHG	Add new data. Change existing data.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
...		
TN	c u	Terminal Number.
...		
FDN	x...x	Flexible Call Forward No Answer DN for an Internal Directory Number.
...		
CLS	(DNO3) DNO1 DNO2	QSIG Call Diversion Notification options for calling party. Notification with diverted-to party's number and name. No notification. Notification without diverted-to party's number and name.

	(DNDY) DNDN	QSIG Call Diversion Notification options concerning forwarded- to party. Notification with Called party's number and name. Notification without Called party's number and name.
	CNDA	Call Party Name Display Allowed
	CFXA	Call Forward to External DN Allowed.
	CFTA	Call Forward by Call Type Allowed.
	DDGA	Directory Number Display on other set Allowed.
	FNA	Call Forward No Answer Allowed.
	HTA	Hunting Allowed.
	NAMA	Name Display on other set Allowed or (Denied).
...		
RCO	(0) - 2	Ringing Cycle Option for Call Forward No Answer.
EFD	x...x	Call Forward No Answer Directory Number for external calls
...		
- CPND	aaa	Calling Party Name Display where: NEW = Add data block. CHG = Change existing data block. OUT = Remove existing data block.
--CPND_LANG	aaa	Calling Party Name Display Language where: (ROM) = Roman. KAT = Katakana.
-- NAME	aaaa bbbb	Calling Party Name Display Name where: First name Last name.

LD 27 – Configure Basic Rate Interface telephones.

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data.
TYPE	TSP	Terminal Service Profile.
DSL	l s c dsl	Digital Subscriber Loop address.
USID	x	User Service Identifier.
...		
DN	xxx...x	Directory Number associated with TSP (1 to 7 digits).
- CTI	VCE DTA	Call type where VCE = circuit switched voice and DTA = circuit switched data.
...		
FEAT	CFXA	Call Forward Allowed to external Directory Number.
FEAT	xxxx	QSIG Call Diversion Notification for calling party where xxxx: DNO1 = no notification DNO2 = notification without forwarded-to (diverted) party's number and name (DNO3) = notification with forwarded-to (diverted) party's number and name when available.
FEAT	xxxx	QSIG Call Diversion Notification for forwarded-to (diverted) party where xxxx: DNDN = no notification of called party's number and name notification (DNDY) = notification with called party's number and name when available (default).
SSRV_ETSI	aaa mmm nnn	ETSI Supplementary Service where: VCFW = Voice Call Forward and DCFW = Data Call Forward.

LD 95 – Modify Call Party Name Display data block.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CPND	Call Party Name Display data block.
CUST	xx	Customer number.
...		
RESN	YES	Display Redirection reason allowed. (NO) = Display Redirection reason denied (default).
- CFWD	aaaa	Mnemonic for Call Forward All Call display. (F) = default
- CFNA	aaaa	Mnemonic for Call Forward No Answer display (N) = default.
- HUNT	aaaa	Mnemonic for Call Forward Busy display. (B) = default

LD 95 – Define Name for telephones.

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	NAME	Name.
CUST	xx	Customer number.
...		
DN	x..x	Directory Number.
- NAME	a..a	Calling Party Name Display in ASCII characters.

LD 11 – Configure the name that is to be displayed on the Forwarded-to (diverted) Party's set.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number.
...		
CLS	DNDA	Dialed Name Display Allowed. (DNDD)= Dialed Name Display Denied (default).

Note: LD 81 may be used to print counting or listing queries pertaining to the new Classes of Service, by entering CNT or LST against the REQ prompt, and the appropriate COS against the FEAT prompt.

Note: LD 83 may be used may be used to print the new Classes of Service in the TN blocks, by entering TNB against the REQ prompt, and the appropriate COS against the CLS prompt.

ISDN QSIG Generic Functional Transport

ISDN PRI implementation

LD 16 – Configure Automatic Trunk Maintenance in Route Data Block.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
...		
DGTP	PRI PRI2 BRI	1.5 Mbit DTI. 2.0 Mbit DTI. Basic Rate Interface.
IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform. The ESIG and ISIG prompt can be entered if both QSIG and QSIGGF packages are included.

LD 17 – Configuration Record.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	
ADAN	aaa aaa x	Add, Move or Change Input/Output Device
...		
- IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform.
PINX_CUST	xx	Customer number.
ISDN_MCNT	60-(300)-350	Layer 3 call control message count five per second time interval.

ISDN BRI implementation**LD 27** - Configure DSL for ISDN BRI trunk configuration.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	DSL	Digital Subscriber Loop.
DSL	c dsl#	Card and DSL Number.
APPL	BRIE	Basic Rate Trunk Application.
ISDN_MCNT	20-(300)-350	Layer 3 call control message count five per second time interval.
CUST	xx	Customer number.
...		

ISDN QSIG Name Display

LD 95 – Modify the Call Party Name Display (CPND) data block.

Note: Call Party Name Display is also defined at the set level in either LD 10 or LD 11 depending on type of set.

Prompt	Response	Description
REQ	NEW	Create Call Party Name Display data block.
TYPE	CPND	Call Party Name Display data block.
CUST	xx	Customer number.
....		
REQ	NEW	Create new name strings.
TYPE	NAME	Name Strings.
CUST	xx	Customer number.
...		
DN	xxxx	Directory Number.

LD 10 – Define Class of Service Name Display Allowed on Analog (500/2500 type) sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add, or Change.
TYPE:	500	Type of telephone.
CUST	xx	Customer number.
...		
CLS	CNDA	Called Party Number Display Allowed. Allows called/connected party name to be viewed by calling party. (CNDD) = Call Number Display Denied (default).

CLS	NAMA	Name Display Allowed on the far end. (NAMD) = Name Display Denied (default).
FTR	CPND	Allow Call Party Name Display name assignment.

LD 11 – Define Class of Service Name Display Allowed on Meridian 1 proprietary sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add, or Change.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
CUST	xx	Customer number.
...		
CLS	CNDA	Call Party Name Display Allowed. Allows display of original DN name on redirection. (CNDD) = Call Party Name Display Denied (default).
CLS	DNDA	Dialed Name Display Allowed. This displays the originally dialed DN Name on redirected calls. (DNDD) = Dialed Name Display Denied.
CLS	NAMA	Name Display Allowed on the far end (default). (NAMD) = Name Display Denied.

LD 12 – Define Class of Service Name Display Allowed on Attendant Consoles.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	xxxx	Console type where xxxx =1250 or 2250.
TN	c u	Terminal Number.
...		
CPND	CNDA	Call Party Name Display Allowed. (CNDD) = Call Party Name Display Denied (default).

LD 27 – Define data for ISDN BRI sets.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	TSP	Terminal Service Profile.
DSL	c dsl	Digital Subscriber Loop address.
USID	x	User Service Identifier.
...		
DN	xxx...x	Directory Number associated with TSP (1 to 7 digits).
...		
- CLIP	YES	Calling Line Identification Presentation for Incoming Calls Allowed. NO = Denied.
- PRES	YES	Presentation of Name and Calling Line Identification (CLID) to far end on outgoing calls allowed. NO = Denied.

LD 16 – QSIG BRI route configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
...		
DTRK	xxxx	Digital Trunk Type for route.
- IFC	xxxx	Interface type for PRI route where xxxx is: ESGF = Interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO QSIG with GF capability.
- RCAP	NDS	Allow Name Display Services (NDS) as new remote capability.

LD 16 – Configure Remote Capability for an MCDN BRI route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
...		
DTRK	xxxx	Digital Trunk Type for route.
- IFC	xxxx	Interface type for D-channel where xxxx is: ESGF = Interface ID for ETSI QSIG with GF capability. ISGF = Interface ID for ISO with GF capability.
- RCAP	ND3	Allow Name Display 3 (ND3) remote capability.
- NCNA	YES	Network Calling Name Allowed.

LD 17 – Configure Remote Capability for QSIG D-channel.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	aaa dch x	Change or New D-channel where aaa = NEW or CHG.
...		
- IFC	SL1	Interface type for D-channel.
...		
- RCAP	NDS	Allow Name Display Services (NDS) as new remote capability.

LD 17 – Configure Remote Capability for MCDN D-channel.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	aaa dch x	Change Input/Output Device.
...		
- IFC	SL1	Interface type for D-channel.
...		
- RCAP	ND3	Allow Name Display 3 (ND3) as new remote capability.

LD 57 – Define the Calling Party Privacy Flexible Feature Code for Meridian 1 proprietary and Analog (500/2500 type) sets.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	FFC	Flexible Feature Code data block.
CUST	xx	Customer number.
FFCT	YES	Flexible Feature Confirmation Tone.
...		
CPP	xxxx	Calling Party Privacy Flexible Feature Code (typically *67). CPP is only prompted if the CPP package is equipped.

ISDN QSIG Path Replacement

LD 15 – Configure Private Integrated Services Network Exchange Directory Number.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking.
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network.
...		
- PINX_DN	xx...x	Private Integrated Services Network Exchange Directory Number, up to seven digits.

LD 16 – Configure New Path Replacement parameters for an ISDN PRI or BRI trunk.

Prompt	Response	Description
REQ	CHG NEW	Change existing data. Add new data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
...		
DTRK	YES	Digital Trunk Type.
- DGTP	PRI BRI	PRI trunk. BRI trunk.
- IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform.

...		
RCAP	PRI PRO	Add Path Replacement as a remote capability. PRI = The encoding method uses Integer values. PRO = The encoding method uses Object Identifier. PRI and PRO are mutually exclusive, and cannot be configured together at the same time on the same link. Precede PRI and PRO with X to remove. The previously configured PR parameters will be valid, if PR is deactivated and then reactivated.
...		
PR_TRIGS	<CR>	Path Replacement Triggers. <CR> = If REQ = NEW, the parameters are set to the default values, which are: DIV 2 3 (two PR attempts, with a three minute delay for Diversion triggers) CNG 2 3 (two PR attempts, with a three minute delay for Congestion triggers) XCON (Connected Number is not a trigger). If REQ = CHG, the Path Replacement parameters are not modified.
	DIV xx-y CNG xx-y CON xx-y	DIV = Diversion is used to trigger Path Replacement. CNG = Congestion is used to trigger Path Replacement. A Connected number different from a called number is used to trigger Path Replacement. where: xx = 0-(2)-15, the number of Path Replacement attempts (the default is two). If 0 is entered, the number will be set to infinite. yy = 1-(3)-7, the delay, in minutes, between two consecutive Path Replacement attempts (the default is three minutes). Precede DIV, CNG, and CON with X to remove the Path Replacement trigger.
PR_RTN	YES (NO)	Retain option is (is not) supported by the far end PINX.
...		

LD 17 – Configure QSIG Path Replacement for a QSIG ETSI or ISO interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CFN	Configuration Record.
ADAN	CHG DCH X	Change D-Channel number.
...		
- IFC	ESGF ISGF	ESGF = ETSI QSIG interface with GF platform. ISGF = ISO QSIG interface with GF platform.
...		
- RCAP	aaa	Add Path Replacement as remote capability where: PRI = Integer values as encoding method. PRO = Object identifier as encoding method. Precede with X to remove.
...		

ISDN Semi Permanent Connections for Australia

Following subscription to the ISDN Semi Permanent Connections (ISPC) service from a Telecom entity, the overlays listed below are used to configure ISPC links when they are used to convey D-channel signaling or used for ISL calls.

For both cases:

- at least one Phantom DTI2 loop must be defined in LD 17; and
- a specific SICA Table must be defined in LD 73.

ISPC links used for ISL calls:

- Configure a TIE ISL Route in LD 16; and
- For each ISPC Link, a TN on the Phantom DTI2 loop must be defined in LD 14.

ISPC links used to convey D-channel signaling:

- The configuration is asymmetrical. One side of the link is defined as MASTER and the other is defined as SLAVE.
- On the MASTER SIDE:
 - Configure Dial Tone Detection Feature in LD 13;
 - Configure Direct Inward Dialing route (non-ISL) in LD 16;
 - Configure Meridian Communication Adaptor or Meridian Communication Unit in LD 11; and
 - Define one TN on Phantom DTI2 loop in LD 14
- On the SLAVE SIDE:
 - Configure Direct Inward Dialing route (non-ISL) in LD 16;
 - Configure Data Interface in LD 11; and
 - Define one TN on the Phantom DTI2 loop in LD 14.

It is assumed that the ISL D-channel has been configured (LD 16). The following settings are recommended: RS-232 for 19.2 kbps and below, HS (RS-422) for speeds above 19.2 kbps, MCA/MCU configured as 64 kbps and DTE device configuration.

Note: ISPC uses a new set of commands in LD 96 to monitor the SLAVE SIDE. These new commands are STAT ISPC lp ch, EST ISPC lp ch and RLS ISPC lp ch. Additionally, in LD 60, the STAT command identifies the channel used as ISPC link to a PBX by indicating the ISPC mnemonic.

LD 11 – Configure Data Interface.

Prompt	Response	Description
REQ:	NEW	Add.
TYPE:	aaaa	Meridian Modular Telephones (MMT) types equipped with Meridian Communication Adapter (MCA) or Meridian Communications Unit (MCU). Where aaaa = 2006, 2008, 2216, 2616 or MCU.
...		
CLS	DTA	Class of Service Data Terminal.
...		
DTAO	MCA	Data Option software for Meridian Communications Adaptor (MCA) that determines the downloaded data, system and operating parameters. The DTAO prompt appears for all Meridian Modular Telephone data ports except MCU.
...		
OPE	YES	Change data port parameters.
- PSDS	NO	Public Switched Data Service (PSDS) option.
- TRAN	SYN	Synchronous data transmission.
...		
<i>The following is for the MCA/MCU used on the MASTER side of the ISPC link.</i>		
- HOT	ON	Enable Hotline for data port.
...		
- BAUD	0-(11)-12	Data rate in bps for the data port. Baud rate 12 (64 kbps) is recommended.

...		
KEY	0 SCR yyyy	Single Call Ringing key used by Hotline, where: 0 = Key number, SCR = Single Call Ringing, yyyy = DN.
KEY	3 ADL yy z...z	Autodial key used by hotline feature, where: 3 = Key number, ADL = Autodial, yy = maximum DN length and z...z = DN preceded by route access code of the Data Interface on the ISPC SLAVE side of link.
<i>The following is for the MCA/MCU used on the SLAVE side of the ISPC link.</i>		
- HOT	OFF	Hotline feature disabled.
- AUT	ON	Autoanswer.
- BAUD	12	Data rate for 64 kbps.
...		
KEY	0 SCR yyyy	Single Call Ringing key, where: 0 = Key number, SCR = Single Call Ringing, yyyy = DN. The Autodial Key on the MASTER side must be configured to access this DN.

LD 13 – Configure Dial Tone Detection on Master Side Meridian 1

Prompt	Response	Description
REQ	NEW	Add data block for Digitone Receiver.
TYPE	aaa	Type of data block, where aaa = DTD (Dial Tone Detector) or XTD (Extended Dial Tone Detector).
TN	c u	Terminal number of tone detector card.

LD 73 – Configure Signaling Categories used for ISPC links

Prompt	Response	Description
REQ	NEW	Create new data block.
TYPE	DTI2	2.0 Mbps DTI data block.
FEAT	ABCD	ABCD Signaling category feature.
SICA	2 - 16	Signaling Category table number.
DFLT	1	Default signaling category used for default tables. For phantom DTI2 trunks choose Table 1 as default table.
Prompts for Incoming/Outgoing Calls.		
IDLE (S)	1001	Idle (sender).
IDLE (R)	1001	Idle (receiver).
Incoming Calls		
...		
SEZA (S)	N	Seize signal acknowledgment sent. For phantom DTI2 trunks, SEZA (S) is not configured.
...		
E CONN (S)	(1001)	Connect send. CONN (S) must be the same as IDLE (S) for phantom DTI2 trunks.
CONN (R)	(1001)	Connect received. E CONN (R) must be the same as IDLE (R) for phantom DTI2 trunks.
...		
C CLRB (S)	N	Clear Back send signal. For phantom DTI2 trunks, there is no C CLRB signal.
...		

Outgoing Calls		
...		
SEZA (R)	N	Seize signal acknowledgment received. For phantom DTI2 trunks, SEZA (R) is not configured.
...		
CONN (S)	1001	Connect send. E CONN (S) must be the same as IDLE (S) for phantom DTI2 trunks.
E CONN (R)	1001	Connect received. E CONN (R) must be the same as IDLE (R) for phantom DTI2 trunks.
...		
C CLRB (R)	N	Clear Back.

LD 17 – Configure Phantom Loops .

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CEQU	Change Common Equipment Parameters.
...		
- DTI2	N	2.0 Mbps Digital Trunk Interface or DTI loop number. Precede loop with an “N” to configure this loop as a phantom loop for trunks.

LD 16 – Configure Route Data Block for ISPC link.

Prompt	Response	Description
REQ	NEW	New route.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route Number.
<i>The following prompts must be answered when ISPC link is used for ISL calls</i>		
TKTP	TIE	TIE Trunk Route Type. TIE trunks must be used for ISPC links used for ISL calls.
...		
DTRK	YES	Digital Trunk Route.
...		
- DGTP	DTI2	2.0 Mbps Digital Trunk Interface. ISL route that uses Phantom Trunk TN's must be configured as DTI2 routes.
ISDN	YES	Integrated Services Digital Network. ISDN must be set to YES for ISL signaling to control ISPC link usage.
- MODE	ISLD	Route uses ISDN Signaling Link. ISDN is allowed only if ISDN = YES and ISL package 147 is equipped.
- DCH	1 - 63	D-channel Port Number that controls ISPC links usage.
- PNI	(0) - 32700	Private Network Identifier. Each customer data block must use a unique PNI when equipped with multi-customer option. It must match the PNI in the far end Customer Data Block to support Network Ring Again, Network ACD and Network Message Service features.
- IFC	SL1	Interface type for PRI route. Connection is direct to another Meridian 1 PBX.
...		

ICOG	IOA ICT OGT	Incoming and outgoing trunk, Incoming trunk only, or Outgoing trunk only.
...		
ACOD	xxxx	Trunk Route Access Code. ACOD must not conflict with numbering plan. The code entered can be up to four digits or up to seven digits, if the DNXP package 150 is equipped.
<i>The following prompts must be answered when ISPC link is used to convey D-channel signaling</i>		
TKTP	DID	Trunk Route Type. DID must be used when associated with an ISPC link used to convey D-channel signaling.
...		
DTRK	YES	Digital Trunk Route.
...		
- DGTP	DTI2	2.0 Mbps Digital Trunk Interface.
ISDN	NO	Integrated Services Digital Network PRI option.
- DSEL	DTA	Data selection. DTA is configured as “data only” when ISPC link is used to convey D-channel signaling.
ICOG	IOA OGT ICT	Incoming and outgoing trunk, Outgoing trunk only, or Incoming trunk only. ICOG configuration is dependent on the side of the ISPC link with which the route is to be associated. On the MASTER side (SMAS = YES in LD 14), ICOG = OGT or IAO. On the SLAVE side (SMAS = NO in LD 14), ICOG = ICT or IAO.
...		
ACOD	xxxx	Trunk Route Access Code. ACOD must not conflict with numbering plan. The code entered can be up to four digits or up to seven digits, if the DNXP package 150 is equipped.

...		
CNTL	YES	Change to Controls or Timers. CNTL must to answered to trigger DTD prompt.
...		
- DTD	YES	Dial Tone Detection provided. On MASTER side of ISPC link (SMAS = YES On LD 14)
...		
NEDC	ETH	Near End Disconnect Control.
FEDC	ETH	Far End Disconnect Control.
CPDC	NO	Meridian 1 is not the only controlling party on incoming calls.
DLTN	NO	Dial Tone on originating call provided on this route. On SLAVE side of ISPC link (SMAS = NO in LD 14)
...		
PRDL	BSY	Busy signal is sent on time-out. The PRDL prompt must be set to “BSY” in order to disconnect ISPC phantom DTI2 trunks when an incomplete or invalid DN is received on the ISPC SLAVE D-channel.

LD 14 – Configure Phantom Trunk Terminal Numbers.

Note: ISPC Reference Numbers supplied by Telecom entity must be associated with Phantom Trunk TNs defined in LD 14.

Prompt	Response	Description
REQ	CHG, END, NEW x, OUT x	Change existing data block, exit overlay program, add new data block (1-255) or remove data block (1-255).
<i>The following answers are required when ISPC link is used for ISL calls.</i>		
TYPE	TIE	Trunk type.
TN	c u	Terminal Number.
...		

SICA	1 - 16	Signaling Category Table Number configured in LD 73.
...		
RTMB	0-127 1-126	Route number, Member number.
CHID	1-382	ISL Channel Identification for trunk. A different channel is required for each phantom TN used for the ISPC links. The same Channel ID must be configured for the ISPC reference number on both Meridian 1 PBXs linked by the connection.
...		
TKID	nnnnnnnn	Trunk Identifier.
SREF	XXXXXXX	Semi Permanent Connection Reference Number as defined by the Telecom administration at subscription. Reference number can be a maximum of seven digits. SREF is prompted only when Trunk TN is on a phantom loop.
SDCH	NO	The ISPC link is not used to convey D-channel signaling.
...		
<i>The following answers are required when ISPC link is used to convey D-channel signaling</i>		
TYPE	DID	Trunk type.
...		
SICA	1 - 16	Signaling Category Table Number configured in LD 73.
...		
RTMB	0-127 1-126	Route number, Member number. ISPC link requires ISL TIE Route.
...		
CLS	DTN	Digitone Class of Service. CLS = DTN for ISPC link to convey D-channel signaling.

...		
SREF	yy..yy	ISPC Reference Number(s) supplied by Telecom entity to a maximum of 7 digits.
SDCH	YES	ISPC link used to convey D-channel signaling.
SMAS	(NO) YES	Data Interface over the ISPC link is MASTER or SLAVE. YES = ISPC link is on MASTER side. NO = ISPC link is on SLAVE side. One side of the ISPC link must be configured with SMAS = YES and the other side with SMAS = NO.

LD 96 – D-Channel Message Monitoring

Commands	Description
STAT ISPC l ch	Get status of data interface establishment process at an ISPC SLAVE side of an ISPC link (where l = loop and ch = channel) which is configured to convey D-channel signaling. The status may be: 1. DISABLED = ISPC link is disabled 2. AWAITING ESTABLISHMENT = the data interface establishment process is waiting to receive DTMF digits. While waiting, dial tone is provided to the ISPC link at the SLAVE side. 3. RELEASED = the data interface establishment process is stopped because either an “RLS ISPC” command has been entered or because the maximum number of tries has been reached. 4. ESTABLISHED = data interfaces at both ends of the ISPC link are established. 5. AWAITING RELEASE = the ISPC link is being disconnected. Once disconnected, the link will transition to the “RELEASED” state. The mode may be: 1. MODE MANUAL N = the data interface establishment process is running with up to “N” number of tries 2. MODE AUTOMATIC = the Meridian 1 provides dial tone to the ISPC slave D-channel.

RLS ISPC l ch	Establish data interface process at the ISPC SLAVE side of an ISPC link at loop (l) and channel (ch), where “N” = the “number of tries” counter. The actual range of N = 0-(1)-255. When N = 0, the mode is set to AUTOMATIC. This mode requires one TDS slot and one DTR unit. This mode is not recommended for use on small systems or systems loaded with heavy traffic. When N > 0, the process is activated for a period of up to N * 30 minutes. The available range goes from 30 minutes (N = 1) to 128.5 hours or 5 days (N = 255). If no value is entered for N, it defaults to a value of 1. When N = 1, one attempt will be made to establish the data interface process before the ISPC slave D-channel is released. Stop the data interface establishment process. When this command is entered, the mode becomes MANUAL and the number of attempts to be performed = 0.
----------------------	--

Japan D70 nB+D**LD 17** – Configure nB+D for D70.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration Record.
ADAN	NEW DCH 0-15	Add a primary D-channel on logical port.
CTYP	aaaa	Card type.
DNUM	0 -15	Device number; physical port for D-channel.
USR	PRI	D-channel mode.
IFC	D70	Interface type for Japan D70.
DCHL	1-9 1-126	PRI loop number and interface identifier for the DCHI when IFC =D70.
...		
OTBF	1-(32)-127	Number of output request buffers.
PRI	1-9 1-126	Loop number and interface ID. Note that the interface ID range is larger when IFC=D70.
	<cr>	End definition of PRI loops.
DRAT	(56K), 64KC, 64KI	D-channel transmission.
...		
ADAN	NEW BDCH 1-15	Add a primary D-channel on logical port.
PDCH	0 -15	Primary D-channel.
CTYP	aaaa	Card type.
DNUM	0-15	Device number (physical port for the D-channel).
BCHL	1-9 1-126	PRI loop number and interface identifier for the DCHI when IFC=D70.
...		

Japan Telecommunication Technology Committee (JTTC) Common Channel Signaling

LD 73 – Define a new Digital Data Block (DDB) with a defined threshold.

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	DDB	Digital Data Block.
CLKN	1-9	Card number for Clock Controller.
- PREF	1-9	Primary Reference Source card for Clock Controller. Enter the PRI loop number or card number that is defined at the DLOP prompt in LD 17. This prompt must be defined for the SLAV Meridian 1 only.
-- SREF	1-9	Secondary Reference (prompted only when PREF is not free-run). Source card for Clock Controller (Option 11C). This prompt must be defined for the SLAV Meridian 1 only.
TRSH	0-15	Threshold set.

LD 17 – Configure a digital loop number for Japan TTC.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CEQU	Common Equipment parameters.
...		
- DLOP	c dd ff	Digital Trunk Interface Loop, where: c = DTI/PRI card number (1-9) dd = number of voice or data calls (0-24) ff = frame format D2, D3, D4, or ESF
- MODE	PRI	Primary Rate Interface mode.
-- TRSH	xx	Digital Trunk Interface threshold. The TRSH value must match the value defined in LD 73.

LD 17 – Configure a new D Channel with Japan TTC Common Channel Signaling interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Action Device and Number.
ADAN	NEW DCH x	Create a new D-channel. x = 0-15
- CTYP	MSDL	Multi-purpose Serial Data Link card type. The MSDL card is the only card type that supports Japan TTC. Note: The MSDL card cannot be used for Option 11C. For Option 11C, however, MSDL must be entered at the CTYP prompt for Downloadable D-Channel.
- GRP	0-4	Network Group number (Option 81 and 81C). Group numbers cannot be changed until the I/O devices associated with that group are disabled.
- DNUM	xx	Device number. All ports on the MSDL card share the same DNUM.
- PORT	0-3	Port number on the MSDL card.
- USR	PRI ISLD	D Channel mode. Primary Rate Interface. Integrated Services Digital Link Dedicated.
- IFC	JTTC	Interface ID for Japan TTC.
- ISDN_MCNT	60-(300)-350	Layer 3 call control message count per 5 second time interval.
-- ISLM	1-382	Integrated Services Signaling Link Maximum.
- DCHL	x	PRI loop number for D-channel, as defined in LD 17 at the DLOP prompt.
...		
- BPS	xxxxx	Asynchronous baud rates (bits per second), where xxxxx is: 1200, 2400, 4800, 9600, 19200, 48000, 56000, 64000.

- SIDE	(USR) NET	Meridian 1 node type. Slave to the controller. Network, the controlling switch.
- RLS	23	Release ID of the switch at the far-end of the D-channel. Supported on Release 23 and later.

LD 16 – Configure Japan TTC interface.

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
TKTP	TIE	TIE trunk type. Used for PBX-to-PBX interface.
DTRK	YES	Digital trunk route.
- DGTP	PRI	Digital trunk type.
ISDN	YES	Integrated Services Digital Network.
- MODE	PRA ISLD	Mode of operation. D-channel mode is Primary Rate Interface. D-channel mode is Integrated Services Digital Link Dedicated.
- DCH	0-159	D channel number, as defined in LD 17.
...		
- IFC	JTTC	Interface for Japan TTC.
-- PNI	(0)-32700	Private Network Identifier. Must match far end PBX.

LD 14 – Configure trunks for Japan TTC.

Prompt	Response	Description
REQ	NEW CHG	Add new data. Change existing data.
TYPE	TIE	TIE trunk data block.
TN	c u	Loop and channel for digital trunk.
CUST	xx	Customer number, as defined in LD 15.
SICA	(1)-16	Signaling category table number. The default is 16 if the loop type = JDML.
RTMB	0-127 1-254	Route number and member number. The Route number is specified in LD 16.
TGAR	0 - (1) - 31	Trunk Group Access Restriction. The default value (1) automatically blocks direct access.

Malicious Call Trace enhancements

Malicious Call Trace enhancements

LD 10 – In order to activate Malicious Call Trace from an analog (500/2500 type) telephone, the user has to dial SPRE + two-digit access code (83) or the MCT FFC.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	500	
TN	c u	Terminal number for Option 11
CLS	MCTA, MCTD	Malicious Call Trace is allowed if class is MCTA.

LD 11 – In order to activate Malicious Call Trace from a Meridian 1 propriety telephone, it should have CLS MCTA, and the TRC key should be defined. However, the same function can be achieved using a transfer or conference key and the SPRE + 83 or the MCT FFC.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	xxxx	BCS set type.
TN	c u	Terminal number for Option 11
CLS	(MCTD), MCTA	Malicious Call Trace is allowed if class is MCTA.

LD 17 – In order to print the MCT record on a dedicated MCT TTY port, USER type MCT has to be defined.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	
ADAN	xxx TTY yy	xxx = new or change. yy = port number 0-63 or 0-15.
USR	MCT	Dedicated TTY port for MCT record.

LD 16 – Setup the recorder route.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route data block.
ROUT	xxx	Route number.
TKTP	RCD	Recorder trunk data block.
ACOD	xxxx	Recorder route access code.

LD 14 – Setup the recorder trunk.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RCD	Recorder trunk.
TN	c u	Card and unit.
CUST	0-31	Customer number.
RTMB	xxx xxx	Trunk route and member number for RCD.

LD 15 – Setup the recorder and alarm options.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB FTR_DATA	Customer data block. Features and options data (Release 21 gate opener).
CUST	0-31	Customer number.
...		
- ALDN	xxxxxxx	DN for the alarm.
- ALRM	(NO), YES	The ALRM prompt appears only if ALDN is defined. ALRM has to be set to YES if the alarm is to be rung for any call (external or internal) when MCT is activated.
- TIME	0-(15)	Time is prompted only if ALRM is set to YES. Time for the alarm is set in one-minute increments from 1 to 15.
- INT	(NO), YES	INT is prompted only if ALRM is set to YES. In addition, INT must be YES if the alarm is to be rung when MCT is activated against internal calls.
- RECD	(NO), YES	If the user wants the recorder, set RECD to YES. This prompt does not appear when a new customer is being defined.
- - MCRT	0-511	The user has to use the recorder route number defined in LD 16. It will only be prompted if the RECD is set to YES.

LD 16 – Set up the alarm for external calls.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route data block.
TKTP	DID, COT	Direct Inward Dial or Central Office Trunks.
ALRM	(NO), YES	Malicious call trace is allowed for external calls when the response is YES.

LD 57 – In order to activate malicious call trace from an analog (500/2500 type) set without using the SPRE and 83, the MCT FFC has to be defined.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Code.
CUST	0-31	Customer number.
CODE	MTRC	Malicious Call Trace.
MTRC	xxxx	Flexible Feature Code for Malicious Call Trace.

LD 16 – For analog and 1.5 Mbit digital trunks, the flash range to be sent to the central office is configured using the FLH timer. In order to send the string to the central office, MCCD has to be defined.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route data block.
RCLS	(EXT), INT	Class marked route as (external) or internal.
...		
CNTL	YES	Changes control or timers.

TIMR	FLH <space> 60-(510)-1536	Flash timer in msec. The range of the Centrex switch hook flash timer is 60-(510)-1536. The FLH value is rounded down to the nearest 10 msec. tick. If the value entered is 128 or 129, then it is set to 130 msec. <i>Software controlled flash</i> 60-127 msec. Digit 1 will be sent. 128-1536 msec. software controlled switch hook flash. <i>Firmware controlled flash</i> The user can enter any value from 60 to 1536 msec. 90 msec. is the hardcoded firmware flash for an XFCOT pack; the craftsman should enter 90 msec. Note: the FWTM prompt must be set to YES for the trunk associated with this route in LD 14, if firmware timing is to be used.
...		
MCTS	(NO), YES	Enter YES to get the new prompts
MCCD	0-8 digits	The call trace request string can be 0-8 digits in length. Valid digits are 0-9, *, and #.
MCDT	(0)-4	Digit string delay is in seconds, in increments of one second.

LD 14 – The WTM prompt is provided for EXUT and XCOT cards. This prompt should be set to YES if firmware timing is to be done for the flash and the card supports this functionality. If the prompt is set to YES for one unit, it is also set to YES for all other units.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	DID, COT	Trunk type.
TN	c u	card, unit.
XTRK	EXUT, XCOT	Card type
FWTM	(NO), YES	Firmware timing for the trunk hook flash is available. This prompt is set to YES if firmware timing for trunk hook flash is supported by the pack.
CUST	0-31	Customer number.
RTMB	xxx yyy	xxx – Trunk route. yyy – Member number for RCD.

LD 73 – Define the DTI2 flash time range.

Prompt	Response	Description
REQ	NEW, CHG, PRT	New, change, or print.
TYPE	DTI2	
FEAT	abcd	Digital signaling category.
SICA	2-16	SICA table number.
...		
FALT (R)	abcd N	If FALT (receive) signal is not required.
P RRC(S)	abcd	Register recall signal activated by MCT.
TIME	10-(100)-630	Time of RRC(S) signal in milliseconds. This is the flash duration used for 2.0 Mbit DTI trunks. It is programmable in one-millisecond increments from 10 to 630.

LD 16 – Setup MCTM timer and tandem delay (2 Mbit PRI for AXE-10 Australia only).

Prompt	Response	Description
REQ	NEW, CHG	New or Change.
TYPE	CDB	Customer data block.
CUST	0-31	Customer number.
MCTS	YES, NO	
MCTM	(0) - 30	Malicious call trace timer (in seconds).
MTND	(NO), YES	Malicious call trace disconnect delay for tandem calls for AXE10 Australia.

Meridian hospitality voice services

LD 15 – Allow call redirection to Meridian Mail for voice messaging:

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB RDR_DATA	Customer data block. Call Redirection data (Release 21 gate opener).
CUST	0-31	Customer number.
...		
- DNDH	YES	Do Not Disturb Hunting. MHVS package (179) must be equipped for this prompt to appear. LD 21 will reflect the DNDH option if MHVS is equipped.

LD 23 – Define the AOP DN:

Prompt	Response	Description
MWC	YES	ACD DN message center DN.
CMS	YES	Command and status link.

Meridian Mail Trunk Access Restriction

LD 15 – Enable Meridian Mail Trunk Access Restriction.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	FTR	Customer Features and Options.
CUST	xx	Customer number.
- OPT	MCI	Message Centre Included.
...		
- MTAR	YES	Meridian Mail Trunk Access restricted. NO = Meridian Mail Trunk Access allowed.

Message Waiting Indication (MWI) Interworking with DMS

Use the following steps to configure MWI.

Procedure 2

Use LD 17 to configure remote D-channel capability

Prompt	Response	Description
REQ	CHG	Change system data
TYPE	CFN	Configuration record
ADAN	CHG DCH 0-63	Change Primary D-Channel
RLS	19, 36	Release ID of the switch at the far end of the D-channel interface. 19 is Meridian 1, 36 is DMS.
RCAP	MWI XMWI	Add remote D-channel capabilities for MWI Remove remote D-channel capabilities for MWI

If the Message Center is on a Meridian 1, it must be a Meridian Mail. No other messaging devices are supported for the Meridian 1. The DMS may use Meridian Mail or other messaging devices (Octel) for its Message Center.

If the Message Center is on DMS for MWI Interworking, a Meridian 1 that is connected to DMS must be on Release 19; other Meridian 1 switches that are connected to the Release 19 switch can be Release 16, 17, or 18.

Procedure 3

Use LD15 to enable Message Service

Prompt	Response	Description
REQ	CHG	
TYPE	CDB	Customer Data Block
OPT	MCI	Message Center is included. This prompt must be set to include the message center feature for both the user's telephone and the message center if the message center is on M-1.

Procedure 4**Use LD 23 to configure an ACD Group for the Message Center users in the remote switch**

Prompt	Response	Description
REQ	NEW, CHG	Add or change system data
TYPE	ACD	Automatic call distribution
CUST	0–99	Customer number
ACDN	xxxx	ACD Directory Number
MWC	YES	ACD DN message center DN
NCFW	xx ... xx	Message Center DN: — a public DN (10 digits) prefixed by an ESN access code. — an ESN number prefixed by an ESN access code Note: Do not define an agent for this ACD group to allow for the automatic call redirection to the ACD Night Call Forward DN where the Message Center DN is defined.

Procedure 5**Use LD 11 to define the ACD Group as the Message Center DN for each telephone**

Prompt	Response	Description
REQ	CHG	
FDN	x..x	Flexible call forward No Answer to Message Center DN
EFD	x..x	Call Forward by Call Type—External No Answer to Message Center DN
EHT	x..x	Call Forward by Call Type—External Hunt to Message Center DN
HUNT	x	Hunt to Message Center DN
KEY	xx MWK x..x	Message Waiting Key, where x..x is the Message Center DN.

Procedure 6**Use LD 15 to configure AC2 to insert ESN access code and PNI**

Prompt	Response	Description
REQ	NEW, CHG, END	
TYPE	CDB NET_DATA	Customer Data Block Networking Data (Release 21 gate opener)
...		
- AC2		Access code 2. Enter call types (type of number) that use access code 2. Multiple call types can be entered. Default is to access code 1.
	NPA	E.164 National
	NXX	E.164 Subscriber
	INTL	International
	SPN	Special number
	LOC	Location code
- ISDN	YES	Change ISDN options
- PNI	1–32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD 15) and the Route Data Block (LD 16) in all PBXs.
...		
- HNPA	200- 999 1200- 1999	Home Number Plan Area code defined in LD 90
- HNXX	100–9999	Prefix for the central office
- HLOC	100–999	Home location code (NARS)
- LSC	1–9999	1- to 4-digit Local Steering Code established in the Coordinated Dialing Plan (CDP). The LSC prompt only appears if user has a 5- or 6-digit dialing plan.

For ISDN Networking Features such as NRAG, NMS and MWI, the originating switch must not use the digit manipulation (DMI) to insert the ESN access code. The ESN access code must be inserted at the terminating/tandem node via the INST prompt if it connects to the DMS in the Public Network.

Procedure 7

Use LD 16 to configure PNI and INAC or INST

Prompt		Response	Description
REQ		NEW,CHG,OUT	
TYPE		RDB	Route Data Block
...			
- PNI		1-32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD 15) and the Route Data Block (LD 16) in all PBXs.
- INAC		(NO), YES	Insert access code. Permit an ESN access code to be automatically added to an incoming ESN call from a private network. If INAC is YES, the digit insertion option (INST) is bypassed. This prompt only appears if the route type is a TIE trunk.
- INST		(0)-99999999	Digits to be inserted in front of leading digits. Use this prompt if route is used for connection to DMS.

Use “INST” in LD 16 at Meridian 1 location A for incoming tandem/terminating calls. Use “INAC” at Meridian 1 locations B and C. For the message center users on M-1, configure Home Location Code and Home NPA to terminate a Facility message from the message center either on M-1 or on DMS to the message center user’s switch. The Facility message is for turning on/off the message waiting indicator for the user.

For the private ESN Uniform Dialing Plan, use LD 90 to configure Home Location Code (HLOC).

Procedure 8**Use LD 90 to configure Home Location Code**

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	0-31	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	HLOC	Home location code
HLOC	xxx	Home location code (3–7 digits)

For the public numbering plan, a 10 digit number (NPA+NXX+XXXXX) is used in the ORIG and DEST IE of the Facility message. Use LD 90 to configure Home NPA and Central Office Translation (NXX) to terminate the Facility message onto the message center user's DN.

Procedure 9**Use LD 90 to configure Home NPA**

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	0-31	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	HPNA	Home NPA Translation
HNPA	xxx	Home NPA

Procedure 10

Use LD 90 to configure Central Office Translation

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	0-31	Customer number
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	NXX	Central Office Translation
NXX	xxx	Office code translation
RLI	0-255	Route list index
SDRR	LDID	Recognized local DID codes
DMI	1-255	Digit manipulation table index. DMI should delete 3 digits.
LDID	xxx	Local DID number recognized within the NPA and NXX.

Procedure 11

Use LD 22 to print the configuration record

Prompt	Response	Description
REQ	PRT	Print system data
TYPE	CFN	Configuration record
RLS	xx	Release ID of the switch at the far end of the D-channel
RCAP	MWI	Remote D-channel capabilities

Note: The mnemonic "MWI" is printed for overlay 22.

Network Attendant Service

LD 12 – Configure Attendant Consoles with NAS keys.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	ATT 1250 2250	Type of console
TN	c u	Terminal Number.
KEY	xx NAS	xx is the key number assigned the NAS function. Each Attendant Console can have only one NAS key defined. This key is optional.

LD 15 – Enable or disable network attendant control, Recall to Same Attendant, NAS routing, and define a TRK ICI key.

Prompt	Response	Description
REQ	CHG	Change existing data block.
TYPE	CDB NET	Customer Data Block. Networking Data. Release 21 gate opener.
CUST	xx	Customer number.
- OPT	aaa	Options.
- AC2	aaa	Access Code 2 as defined in LD 86.
- ISDN	YES	Integrated Services Digital Network
...		
- NAS	(YES) NO	Specifies whether to (allow) or deny attendant control for call extension.
- NAS_ ACTV	(NO) YES	Specifies whether to allow or (deny) NAS routing.
- NAS_ ATCL	(YES) NO	Specifies whether to allow (YES) or deny attendant control for call extension.

- NAS_ ACTV	(NO) YES	Specifies whether to allow or (deny) NAS routing.
...		
- ICI	xx	Respond with the key number, from 0 to 19, followed by a space, followed by the trunk type.
	NCO	Network CO trunk
	NDID	Network DID trunk
	NTIE	Network TIE trunk
	NFEX	Network FEX trunk
	NWAT	Network WAT trunk
- RTSA	(RSAD)	Recall to Same Attendant Denied
	RSAA	Recall to Same Attendant Allowed
	RSAX	Recall to Same Attendant allowed, with queuing on busy attendant.

LD 17 – Configure the D-channel interface (DCHI) for NAS.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	ADAN	Action Device and Number.
DCHI	xxx	Respond with DCHI number for which NAS signaling is to be allowed or restricted.
NASA	(NO) YES	Specifies whether DCHI is to be allowed or (denied) NAS signaling.

LD 86 – Configure NAS routing.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
CUST	xx	Customer number.
...		
FEAT	NAS	Specifies type of data to be changed.
TBL	0–63	Routing table number, from 0 to 63. Without Multi-Tenant Service, 0 is the customer routing table. With Multi-Tenant Service enabled, NAS tables 1-63 may be associated with CPGs 1-63.
ALT	1–7	An alternative attendant or routing table, from 1 to 7. (To clear an old number, type an X before typing the new number. The old number cannot be cleared if it is associated with a schedule period. Reach TODS by pressing the return key.)
ID	xxxxxxxxxxxxxxxx	The dialed digits (including the network access code) needed to reach an attendant associated with the alternative number. Respond with a string of up to 16 digits to change the attendant ID; press the return key to leave the ID unchanged, exit the prompt, and return to ALT.
TODS	0–31	Specifies a schedule period, from 0 to 31, where 0 is the default to handle all time periods not defined in 1 through 31. Type an X before a period number to remove the schedule period. (Typing an X before a 0 clears all associated alternatives, leaving the default treatment as local attendant treatment.) Press the return key to continue the NAS feature setup process.
- PER	HR:MIN HR:MIN	Specifies the start and stop times for the period using 24-hour format. Start time must be before the stop time, and minutes can be only 00 or 30. Press the return key to leave times unchanged and move to the DAYS prompt.

- DAYS	D, D, ... D	Specifies applicable days of the week for the time period. Respond by inputting a number representing each day for which the schedule is active (where 1=Monday, 2=Tuesday,...7=Sunday). Type an X before the day number to deactivate the schedule period for that day. No more than seven entries are permitted on an input line. Press the return key to leave this schedule unchanged and move to the next prompt. (If not otherwise specified, a schedule period is assumed valid for all days.)
ALST	xxxx	Alternative list to be used for the schedule period. Respond with up to four alternative numbers in the order in which they are to be attempted. (These numbers are defined using ALT.)
DBK	Z Z Z Z	Alternatives for which “drop back busy” is to be active during this period. Respond with four entries of Y (allow) or N (deny) for the alternative evoked by the previous prompt. Responses are applied in sequence.
QUE	Z Z Z Z	Specifies alternatives for which queuing to a route is to be allowed during this period. Respond with four entries of Y (allow) or N (deny) for the alternatives evoked by ALST. Responses are applied in sequence. If the response is Y, off-hook queuing must already be configured for calls to be queued on this route.

LD 93 – Assign a NAS routing table to Console Presentation Groups.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CPG	Console Presentation Group.
CUST	xx	Customer number.
CPG	1-63	Console Presentation Group number.
CPGS	(NO) YES	Customer Presentation Group Services.
ROUT	0-511	Route number.
TEN	1-511	Tenant number.
NTBL	(0) - 63	NAS routing table to be used for calls directed to this Attendant Console Group(ACG)/ Console Presentation Group (CPG).

LD 16 – Allow or deny pre-answer tromboning (allow or deny an incoming call to be directly routed back on the same route).

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	Route Number.
TKTP	aaa	Trunk Type requires response when REQ=NEW.
TRMB	(YES) NO	Tromboning. NO = Tromboning denied. Incoming trunk call on route may not be routed back on same route. YES = Tromboning allowed. Incoming trunk call on route may be routed back on the same route. Only applies to calls routed using NARS/BARS or CDP. Does not apply to calls redirected by Hunt, Forward All Calls, or Forward No Answer.

Note: The anti-tromboning capabilities programmed in LD 16 only apply to attendant extended calls.

NAS performs tromboning when required regardless of the LD 16 programming. However, if redundant (or tromboned) trunk connections are to drop after the telephone is answered, this prompt must be set to NO across the network where this might occur.

Network and Executive Distinctive Ringing

LD 10 – Respond to the CLS prompt with EXR0, EXR1, EXR2, EXR3, or EXR4 to define the distinctive ringing cadence/tone to be used for 500/2500-type sets (a value of 0 inhibits distinctive ringing).

LD 11 – Respond to the CLS prompt with EXR0, EXR1, EXR2, EXR3, or EXR4 to define the distinctive ringing cadence/tone to be used for SL-1 sets (a value of 0 inhibits distinctive ringing).

LD 16 – Respond to the DRNG prompt with NO or YES to deny or allow distinctive ringing. Respond to the NDRI prompt with a digit between 0-4 to define the network ring index (a value of 0 results in the index not being defined).

LD 56 – Define the distinctive ringing cadence for 500/2500-type sets and the distinctive ringing tone for SL-1 sets in the Flexible Tone and Cadence (FTC) table:

- Respond to the NDR1 PBX prompt to define the first distinctive ringing cadence for 500/2500-type sets.
- Respond to the NDR1 BCS prompt to define the first distinctive ringing cadence for SL-1 sets.
- Respond to the NDR2 PBX prompt to define the second distinctive ringing cadence for 500/2500-type sets.
- Respond to the NDR2 BCS prompt to define the second distinctive ringing cadence for SL-1 sets.
- Respond to the NDR3 PBX prompt to define the third distinctive ringing cadence for 500/2500-type sets.
- Respond to the NDR3 BCS prompt to define the third distinctive ringing cadence for SL-1 sets.
- Respond to the NDR4 PBX prompt to define the fourth distinctive ringing cadence for 500/2500-type sets.
- Respond to the NDR4 BCS prompt to define the fourth distinctive ringing cadence for SL-1 sets.

Network call redirection

The following procedures define the step-by-step procedures for the administration of these features within an ISDN environment.

Follow the steps described here to implement features for Network Call Redirection:

- Network Call Forward Busy (NCFB)
- Network Hunting (NHNT)
- Network Transfer (NXFER)

To configure NCFNA, NHNT, NCFB, NXFER, use the following steps:

- 1** LD15 Configuration Record (Procedure 12)
Forward calls to a forwarding DN.
- 2** LD16 Route Data Block (Procedure 13)
Allow Network Call Redirection.
- 3** LD95 Call Party Name Display (Procedure 14)
Display the reason calls are redirected.
- 4** LD95 Call Party Name Display (Procedure 15)
Give each DN a name.
- 5** LD10 analog (500/2500 type) telephone sets (Procedure 16)
Enable the appropriate feature in the data block.
- 6** LD11 Meridian 1 propriety telephone sets (Procedure 17)
Enable the appropriate feature in the data block.

Note: Responses in parentheses are default values throughout the procedure.

Procedure 12**Respond to the following prompts in LD15**

Prompt	Response	Description
REQ	CHG	
TYPE	CDB RDR_DATA	Customer data block Call Redirection data (Release 21 gate opener)
CUST	0-31	Customer number
...		
- FNAD	FDN	Call forward no answer DID calls—Flexible CFNA DN
- FNAT	FDN	Treatment for External CFNA calls (non-DID—when FDN is selected, CFCT handles the call)
- FNAL	FDN	Requests treatment for CFNA—when FDN is selected, DID calls are forwarded
...		

Procedure 13
Respond to the following prompts in LD16

Prompt	Response	Description
REQ	CHG	
TYPE	RDB	Route data block
CUST	0-31	Customer number
ROUT	0-511	Route number
...		
NCNA	YES, (NO)	Network Call Name is (is not) allowed
NCRD	YES, (NO)	Network Call Redirection. Allows network call redirection messages to be sent (or blocks messages if NCRD= NO) Note: Network Call Redirection can occur without answering YES to the NCRD prompt. This prompt only controls the sending of Network Call Redirection messages, not the actual redirection of the call. The message supplied when NCRD = yes provides the information for the CLID display. When NCRD is NO, the call is redirected without the CLID redirection information. It is appropriate to set NCRD = no when your network interfaces with a network that is equipped with an earlier version of ISDN than X11 Release 14.
TRO	YES, (NO)	Trunk Optimization TRO economizes trunk use throughout the network as part of the NCRD feature.

Procedure 14**Respond to the following prompts in LD95**

Prompt	Response	Description
REQ	CHG	
TYPE	CPND	Call Party Name Display data block
CUST	0-31	Customer number
ROUT	0-511	Route number
...		
des		
RESN	YES	Allow display of reason for redirecting calls
CFWD	xxxx, (F)	Display mnemonic for (Network) Call Forward All Calls. Default is "F." Enter the mnemonic that represents NCFAC on a set's CLID display.
CFNA	xxxx, (N)	Mnemonic for (Network) Call Forward No Answer display. Enter the mnemonic that represents NCFNA on a set's CLID display. Default is "N."
HUNT	xxxx, (B)	Mnemonic for Network Hunting display
PKUP	xxxx, (P)	Mnemonic to allow Call Pickup display
XFER	xxxx, (T)	Mnemonic for Call Transfer display

Procedure 15**Respond to the following prompts in LD95**

Prompt	Response	Description
REQ	CHG	
TYPE	NAME	Call Party Name Display name entry
CUST	0-31	Customer number
DIG	xxx xx	An existing Dial Intercom Group number (0-253) and member number (0-31)

Procedure 15
Respond to the following prompts in LD95

Prompt	Response	Description
NAME	aaa...a	CPND name using ASCII characters. The DIG prompt is reprompted. Enter <CR> to get the DN prompt.
DN	xxxx	DN of eligible type.

Procedure 16
Respond to the following prompts in LD10

Prompt	Response	Description
REQ	CHG	
TYPE	500	Enter set type
HUNT	xxxx	Hunt DN for internal calls
FTR	EFD xxx	External Flexible call forward DN Only allowed if LD15 is properly configured: FNAD = FDN FNAL = FDN FNAT = FDN If the DNXP package is equipped, up to 7 digits are allowed; otherwise, only 4 digits can be entered. Accepted only if CLS is MWA or FNA.
	EHT xxxx	External Hunt DN Only allowed if CLS = CFTA Same digits defined as above
	FDN xxxxxxxx	Flexible Call Forward No Answer DN (cannot be an LDN). Same digits defined as above

Procedure 17**Respond to the following prompts in LD11**

Prompt	Response	Description
REQ	CHG	
TYPE	xxxx	Enter set type as appropriate
FDN	x..x	Flexible CFNA DN where xx is the MCDN. The FDN value should include AC1/AC2 when applicable (up to 13 digits).
EFD	xxxx	Network CFNA DN for External calls
HUNT	xxxx	Network Hunt DN for calls with CLS = CFTD
EHT	xxxx	Network Hunt DN for External calls.

Network drop back busy and Off-hook queuing

Note: Drop Back Busy (DBB) and Remote Virtual Queuing (RVQ) are both packaged under the Originating Routing Control/Remote Virtual Queuing (ORC-RVQ) package 192. If DBB are both configured, DBB will take precedence over RVQ. If the user wishes to activate RVQ, DBB must be disabled for a route entry in response to the IDBB prompt. If the user wishes to activate DBB, it must be enabled by entering DBI or DBA.

In Overlay 87, allow OHQ Network Class of Service for the customer.

Prompt	Response	Description
REQ	CHG	Change
CUST	nn	Customer number
FEAT	NCTL	Network Control
SOHQ	YES	Allow system (customer) Off-hook queuing.
- OHTL	nn	Off-hook queue time limit.
SCBQ	YES,(NO	Allow, (disallow) system (customer) Call Back queueing.
NCOS	nn	Network Class of Service number. The originating telephone must have the same value.
- OHQ	YES, (NO)	Off Hook Queueing allowed (not allowed) for this NCOS Both RVQ and OHQ can be enabled on a system. Only one can be activated at a time.
- CBQ	YES, (NO)	Call Back Queueing allowed (not allowed) for this NCOS
- RETT	2-(10)-30	Remote Virtual Queuing Retry Timer (Time between searches, in seconds).
- RETC	4-(5)-16	Remote Virtual Queuing Retry Counter (Number of times RVQ searches the initial set before moving on to the extended set).

In Overlay 86 (Route List Data Block), configure the originating node for Remote Virtual Queuing.

Prompt	Response	Description
REQ	CHG	Change
CUST	0-31	Customer number
FEAT	RLB	Route List data block
RLI	nn	Route List Index
ENTRY	nn	Route List entry number
ROUT	nnn	Route number
...	...	...
IDBB	(DBD) DBI DBA	Enter DBB (Drop Back Busy Disabled). This will disable Drop Back Busy, and enable Remote Virtual Queuing for the customer. DBI = Drop Back if Initial set is busy. DBA = Drop Back if all routes are busy.

Network Individual Do Not Disturb

Use the following procedure to configure the Network Individual Do Not Disturb feature.

Step	Overlay	Action
1	LD 12 Attendant Console	Allow the attendant to override DNDI, and configure the attendant console for DNDI
2	LD 15	Configure intercept treatment for DNDI
3	LD 16	Define the route number for DNDI RAN intercept treatment (the same route number defined in LD 15)
4	LD 14	Define the trunks associated with the RAN route

Step 1: LD 12 – Allow the attendant to override DNDI, and configure the attendant console for DNDI.

Prompt	Response	Description
KEY	xx BKI	Attendant keys The key number on the attendant console assigned to Break-in to DNDI
	xx DDL	The key number on the attendant console assigned for DNDI indication

Step 2: LD 15 – Configure intercept treatment for DNDI.

Prompt	Response	Description
DNDT	(BST) ATT RAN	Busy tone (default) Attendant Recorded announcement
RRT	0-511	Route number for the recorded announcement, prompted only if the DNDI intercept treatment is RAN

Step 3: LD 16 – Define the route number for DNDI RAN intercept treatment (the same route number defined in LD 15).

Prompt	Response	Description
RRT	0-511	Route number for the recorded announcement, prompted only if the DNDI intercept treatment is RAN
TKTP	RAN	The trunks associated with the RAN treatment

Step 4: LD 14 – Define the trunks associated with the RAN route.

Prompt	Response	Description
TKTP	RAN	

Network Intercom (Hot Type D and Hot Type I Enhancements)

Use the following procedure to configure Network Intercom.

Note: When configuring two-way Hot Type D keys in voice mode, it must be taken into account the fact that the CLID does not transmit the originator’s Hot Type D DN between ISDN locations; it contains the prime DN of the originating set, and not the originator’s Hot Type D DN. Therefore, ringing may occur on the Hot Type D key rather than immediate answer, since a match could not be found for the originator’s Hot Type D DN. For this reason also, when the configured mode is either voice, ringing, or non-ringing, a “No Answer Indication” is not left on the set called set of a two-way Hotline. It is therefore recommended that the Hot Type I be used for a two-way Hotline, since it relies only on the prime DN.

LD 11 – Define Hot Type D and I keys and Classes of Service as follows:

Prompt	Response	Description
REQ	NEW, CHG, OUT	Configure, change or remove.
TYPE	aaaa	Telephone type where aaaa cannot = M3000.
TN	c u	Terminal Number for the Option 11.
...		
CLS	FICA (FICD) NAIA (NAID)	Forward Hot Type I allowed. Forward Hot Type I denied (default). No Answer indication allowed. No Answer indication denied (default).
...		

KEY	nn HOT D dd target_num hot_dn R/V/N/(H)	Two-way Hot Line type D Key. nn = key number. dd = number of digits dialed. target_number = terminating DN (31 digits maximum). Hot_dn = two-way Hot Line DN. Termination mode: R = Ringing V = Voice N = Non-ringing, and H = Hot Line (the default).
KEY	nn HOT I dd target_number (V)/N/R	Hot Line type I key. nn = key number. dd = number of digits dialed. target_number = terminating DN (31 digits maximum). Termination mode: V = Voice (the default) N = Non-ringing, and R = Ringing.

LD 95 – Configure the Calling Party Name Display:

Prompt	Response	Description
REQ	NEW, CHG	Configure or change.
TYPE	CPND	Calling Party Name Display.
CUST	0-31	Customer Number.
...		
NITC	aaaa (NI)	Non-Hot Line call. Indicates that the Hot Line call terminated as a normal call.

Network Messaging Service — Message Centre

All these procedures apply to both NMS-MM and NMS-MC except for Procedure 22 which is Meridian Mail only.

Procedure 18

Use LD17 to define the software release of each switch at the far end of each D-channel in the NMS network (X11 Release 17 and earlier)

Prompt	Response	Description
REQ	NEW, CHG	
TYPE	CFN	Configuration database
ISDN	YES	
DCHI	1-15	D-channel to the far end
RLS	xx	Enter the X11 release of the far end. The minimum release for NMS-MC is 15, and for NMS-MM is 16.

Procedure 19

Use LD17 to define the software release of each switch at the far end of each D-channel in the NMS network (X11 Release 18 and later)

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	CHG DCH 0-63	Change D-channel information
RLS	xx	Enter the X11 release of the far end. The minimum release for NMS-MC is 15, and for NMS-MM is 16.

Procedure 20
Use LD15 to enable Message Services

Prompt	Response	Description
REQ	CHG	
TYPE	CDB	Customer Data Block
OPT	MCI	Message Center is included. This prompt must be set to include the message center feature for both the user's telephone and the message center.

Procedure 21
Create an ISDN transport signaling database in LD16

Prompt	Response	Description
REQ	NEW, CHG	
TYPE	RDB	Route Data Block
CUST	xx	Customer number or range of customer numbers
ROUT		Route number
ISDN	YES	ISDN option
INAC	(NO), YES	Insert Access Code. INAC = YES is required for ISDN network features. This prompt only appears if the route type is a TIE trunk.
PNI	1-32700	Customer private identifier—unique to a customer. This is the private identifier of the target switch and must be the same number used for PNI in LD15 for remote customer. Matches PNI in LD16 at remote to PNI in LD15 at local site.
NCRD	YES	Network Call Redirection
TRO	YES	Trunk Route Optimization allowed (denied) on the route.

Procedure 22**Use LD23 to define Meridian Mail ACD group in the remote switch (NMS-MM only)**

Prompt	Response	Description
REQ	aaa	Action request: NEW, CHG, PRT, END
TYPE	ACD	Automatic Call Distribution data block
CUST	xx	Customer number, 0-31
ACDN	xxxxxxx	The Meridian Mail DN
MWC	YES	Message Center services
MAXP	1	Maximum number of agent positions
NCFW	x..x	Night Call Forward DN, where x...x is the NMS-DN. If network DN, include AC1/AC2.

Note: Do not define any ACD agents for this ACD group to allow automatic redirection to the ACD Night Call Forward DN (NFCW).

Procedure 23**Use LD11 to define Network Message Services DN for each telephone**

Prompt	Response	Description
REQ	CHG	
FDN	x..x	Flexible Call Forward No Answer NMS-DN. See Note below.
EFD	x..x	Call Forward by Call Type - External No Answer to NMS-DN.
EHT	x x	Call Forward by Call Type - External Hunt to NMS-DN
HUNT	x	Hunt to NMS-DN
KEY	xx MWK x...x	Message Waiting Key, where x..x i s the NMS-DN. See Note below.

Note: The NMS-DN may be the local or the network ACD DN.

Procedure 24**Use LD10 to define Network Message Services DN for each telephone**

Prompt	Response	Description
REQ	CHG	
FTR	FDN x..x	Flexible call forward no answer NMS-DN, x..x is the NMS-DN. The NMS-DN may be the local or the network DN. If network DN, include AC1/AC2.

Procedure 25**Network Message Services DN (applies to both NMS-MC and NMS-MM)**

Call type	Network Message Services DN (NMS-DN)	Number of digits
Private call using Uniform Dialing Plan (UDP)	ACC + LOC + XXXX	8 to 9
Private call using Coordinated Dialing Plan (CDP)	DSC + X..X	10 maximum
Public numbering plan	ACC + (1) + NPA + NXX + XXXX ACC + (1) + NXX + XXXX	14 maximum

Network Ring Again

Follow these steps to configure Network Ring Again:

- 1 LD17 Configuration Record (Procedure 26)
Set the software release ID of the far end.
X11 RELEASE 17 AND EARLIER
- OR*
- 1 LD17 Configuration Record (Procedure 27)
Set the software release ID of the far end.
X11 RELEASE 18 AND LATER
- 2 LD15 Customer Data Block (Procedure 28)
Set up Private Network Identifier (PNI) mapping between call type translator HLOC, LSC, HNPA or HNXX for proper CLID construction.
- 3 LD16 Route Data Block (Procedure 7)
Set up duration timer (NRAG), Private Network Identifier (PNI), insertion of ESN access codes (INAC).

Procedure 26

Use LD17 to define the software release ID (X11 Release 17 and earlier)

Prompt	Response	Description
REQ	CHG	Configuration data block
TYPE	CFN	
ISDN	YES	
DCHI	1-15	D-channel number
.		
.		This is the current software release of the far end. If the far end has an incompatible release of software, it prevents the sending of application messages. The minimum X11 release is 14, the minimum BCS release is 28.
RLS	xx	

Procedure 27**Use LD17 to define the software release ID (X11 Release 18 and later)**

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW DCH 0-63	Add a primary D-channel (can also CHG and OUT DCH)
CTYP	DCHI, MSDL	Card type where: MSDL = Downloadable D-channel daughterboard.
DNUM	0-15	Device number: physical port (odd) for D-channel on DCH, physical card address for MSDL
_PORT	0-3	Port number on MSDL card
RLS	xx	Release ID of the switch at the far end of the D-Channel

Procedure 28**Respond to the following prompts in LD15**

Prompt	Response	Description
REQ	CHG	
TYPE	CDB NET_DATA	Customer data block Networking Data (Release 21 gate opener)
CUST	0-31	Customer Number.
- OPT	RNA	Allow Ring Again No Answer.
_ AC2	aaa	Access Code 2. Enter call types (type of number) that use access code 2. Multiple call types can be entered. Default is to access code 1.
- ISDN	YES	Change ISDN options
- PNI	1-32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD15) and the Route Data Block (LD16) in all PBXs.

Procedure 28
Respond to the following prompts in LD15

Prompt	Response	Description
...	100-319	Area code for the Meridian 1 system
	100-319	Prefix for the Central Office
	100-319	Home location code (NARS)
	1-9999	1- to 4-digit Local Steering Code established in the Coordinated Dialing Plan (CDP). The LSC prompt only appears if user has a 5- or 6-digit dialing plan.

Procedure 29
Respond to the following prompts in LD16

Prompt	Response	Description
REQ TYPE	NEW,CHG,OUT RDB	Route data block
CNTL TIMR	(NO),YES NRAG (30)-240 Note: Package 148, Advanced ISDN Features, is required.	Changes to controls or timers Network Ring Again duration timer (T6 and T7 timers)—time is in minutes. Currently, only a value of 30 minutes is supported.

Procedure 29**Respond to the following prompts in LD16**

Prompt	Response	Description
INAC	(NO), YES	Insert Access Code. Permit an ESN access code to be automatically added to an incoming ESN call from a private network. If INAC is YES, the digit insertion option (INST) is bypassed. This prompt only appears if the route type is a TIE trunk.
PNI	1-32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD15) and the Route Data Block (LD16) in all PBXs.

Network-wide Listed Directory Number

LD 10, 11 – The LDN prompt has been changed to accept a greater value (0-5) in these overlays.

LD 15 – Four new prompts have been added for defining the extended LDN numbers and the Listed Attendants (LDAs) belonging to the LDNs. The prompts can be answered in the same way as the prompts LDN0, 1, 2, 3. The LDA prompts only appear if DLDN is set to YES. These store the Attendant Console number associated with the LDN number.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB LDN_DATA	Customer Data Block. Departmental Listed Directory Numbers data (Release 21 gate opener).
CUST	0-31	Customer number
- OPT	aaa	Options
- DLDN	YES	
...		
- LDN3	...	
- LDA4	xx xx..., ALL	xx can be in the range of 1-63 or all attendants. Precede an attendant number with X to remove.
- LDN4	x...x	Listed Directory Number. If the DNXP package is equipped, up to seven digits are allowed; otherwise, only four digits are allowed.
- LDA5	xx xx..., ALL	xx can be in the range of 1-63 or all attendants. Precede an attendant number with X to remove.
- LDN5	x...x	Listed Directory Number. If the DNXP package is equipped, up to seven digits are allowed; otherwise, only four digits are allowed.

LD 15 – Turn on or off the network recognition of the LDNs. The ICI keys can also be assigned to the new LDN values.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB LDN_DATA	Customer Data Block. Departmental Listed Directory Numbers data (Release 21 gate opener).
CUST	0-31	Customer number
- OPT	NLDN	Network Wide LDN allowed
...		
- ICI	xx LD4	New answer to existing prompt, where xx is the key number.
- ICI	xx LD5	New answer to existing prompt, where xx is the key number.

LD 93 – This overlay is used for printing LDN information.

Prompt	Response	Description
TYPE	CPGP	Changes affect the Console presentation group parameters.
...		
LDN3	...	
LDN4	xxxx(xxx)	Listed Directory Number. If the DNXP package is equipped, up to seven digits are allowed; otherwise only four can be entered.
LDN5	xxxx(xxx)	Listed Directory Number. If the DNXP package is equipped, up to seven digits are allowed; otherwise only four can be entered.
...		
ICI	0-19 LD4	New answer to existing prompt.
ICI	0-19 LD5	New answer to existing prompt.

Option 11 Downloadable D-Channel

Add an NTAK93 DCHI or NTBK51 DDCH card. Use Overlay 17.

Prompt	Response	Description
REQ		
TYPE	CFN	configuration data block
ADAN	NEW DCH 1-15 CHG DCH 1-15 OUT DCH 1-15	Add a primary D-Channel port number. Any unused SDI port number Change a primary D-Channel Out the primary D-Channel
CTYP	MSDL	MSDL for Downloadable D-Channel configuration (NTBK51 D-channel). The MSDL base and D-Channel application software are downloadable into the DDCH card.
CDNO	1-9	Card slot number to be used as the primary DDCH
PORT	1	PORT must be set to "1"
ADAN	NEW BDCH 1-15 CHG BDCH 1-15 OUT BDCH 1-15	Add a backup D-Channel port number. Any unused SDI port number Change a backup D-Channel Out a backup D-Channel
PDCH	X	Primary D-Channel X as defined above
CTYP	MSDL	Card type (automatically printed because it must be the same as the primary D-Channel)
CDNO	1-9	Card slot number to be used as the backup D-Channel
PORT	1	PORT must be set to "1"
...	...	...

Overlap Signaling

Use the following procedure to configure Overlap Signaling.

Step	Overlay	Action
1	LD 17 Configuration Record	Enable or disable overlap sending and overlap receiving, and set number of leading digits to delete when receiving, and the interval between the sending of INFORMATION messages.
2	LD 86 Route List Block	Define the minimum overlap digit length

Step 1: Enter the following commands in Overlay 17.

Prompt	Response	Description
REQ		
TYPE	CFN	Configuration Record
.		
.		
.		
ISDN	YES	
DCHI	xx	D-channel interface number
.		
.		
.		
CNEG		
RLS		
OVLRL	(NO), YES	Overlap Receiving (not) allowed

DIDD	(0)-15	Number of leading digits to delete when receiving digits from DID trunk
OVLS	(NO), YES	Overlap sending (not) allowed
OVLT	(0)-8	Overlap timer in seconds (this timer controls the interval between the sending of INFORMATION messages; recommended value is 1)

Step 2: Enter the following commands in Overlay 86.

It may be necessary to adjust the value of FLEN in overlay 90, so that FLEN is greater than OVLL, being the maximum number of digits which can be used for this ESN or CDP steering code.

Prompt	Response	Description
REQ		
TYPE	RLB	Route List Block
RLI	xx	Route List Block number
.		
.		
.		
ISSET	xx	Number of digits in the initial set
MFRL	xx	Minimum FRL required to access this Route List
OVLL	(0)-16	Minimum Overlap Digit Length (number of digits dialed by called, not including ESN access code, before the SETUP message is sent or outpulsing begins). If this value is 0, then FLEN alone will determine when overlap sending takes place. It is recommended that OVLL be at least the average number of digits in the ESN or CDP steering code which will be using the particular Route List Block.

QSIG

LD 17 – Assign the configuration record.

Prompt	Response	Description
ADAN	NEW, CHG, OUT, MOV, DCH xx	New, change out, or move.
...		
IFC	ISIG ESIG	Interface ID for ISO QSIG. Interface ID for ETSI QSIG.
TIMR	(NO), YES	NO = skip timer prompt. YES = change timer value.
T310	10-(30)-60	10-60 seconds (one-second increments). 30 seconds is the default value.

LD 16 – Use this overlay to define a route data block.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route data block.
...		
DGTP	PRI, PRI2, BRI	Digital route type.
IFC	ISIG ESIG	New DCH interface ID.

LD 97 – This overlay defines the Extended Peripheral Equipment (XPE) configuration. However, data relating to the software downloading for the MSDL card will remain in the overlay. Hence, this overlay needs to be modified to accept the parameters required for downloading the PRI application data files.

The parameters basically specify conditional or forced downloading.

Prompt	Response	Description
REQ	CHG, PRT	Change, or print.
TYPE	SYSM	
...		
FDLC	P1, P2	Peripheral Software Download Option. P1 = This will be set to the application and its data files, such as BRIE, and PRIE. P2 = Specifies conditional (C) or forced downloading (F).

Radio Paging Improvement

LD 15 – In order for the this feature to operate network wide, the Recall to Same Attendant (RTSA) prompt must has to be activated on the originating node as follows:

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB ATT	Customer data block. Attendant Consoles data (Release 21 fate opener).
CUST	0-31	Customer number
- OPT	aaa	Options
...		
RTSA	RSAA	Recall to same attendant allowed.

LD 87 – Set up remote Radio Paging on originating node.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	TSC, DSC	Trunk/Distant Steering Code (enter RPAX FFC defined on paging node).
RRPA	(NO), YES	Remote Radio Paging option.
RLI		Route List Index of route list block used to route to paging node.

Radio Paging Improvement Continuation

LD 15 – In order for the this feature to operate network -wide, the Recall to Same Attendant (RTSA) prompt must be activated on the originating node as follows:

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB ATT	Customer Data Block. Attendant Consoles data. Release 21 gate opener.
CUST	xx	Customer number.
- OPT	aaa	Options.
...		
RTSA	RSAA	Recall to Same Attendant Allowed.

LD 87 – Set up remote Radio Paging on originating node.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	TSC DSC	Trunk Steering Code Distant Steering Code (enter RPAX FFC defined on paging node).
RRPA	(NO) YES	Remote Radio Paging option.
RLI		Route List Index of Route List Block used to route to paging node.

Recorded Announcement for Calls Diverted to External Trunks

Use the following procedure to configure Recorded Announcement for Calls Diverted to External Trunks.

Procedure 30

Configure Recorded Announcement for Calls Diverted to External Trunks

Step	Overlay	Action
1	LD 16	Configure Recorded Announcement for Calls Diverted to External Trunks in Route Data Block.

Step 1 - Configure Recorded Announcement for Calls Diverted to External Trunks

Enter the following commands in **Overlay 16**.

Prompt	Response	Description
REQ	NEW/CHG	New RDB or change data.
TYPE	RDB	Route Data Block.
DLDN	YES	YES if no CPG configured.
...		
FORM	aaa	Signaling format.
ICOG		Incoming and/or outgoing trunk.
RANX	(NO)	(RAN not requested when a call is forwarded to this route)
	YES	RAN is requested when a call is forwarded to this route
	<cr>	RANX value is not changed.
RANR	0-127	The route number for the RAN route (appears only if RANX = YES)
...		

Remote Virtual Queueing

In Overlay 86 (Route List Data Block), configure the originating node for Remote Virtual Queueing.

Prompt	Response	Description
REQ	CHG	Change
CUST	0-31	Customer number
FEAT	RLB	Route List data block
RLI	nn	Route List Index
ENTRY	nn	Route List entry number
- ROUT	nnn	Route number
...	...	...
- IDBB	(DBD) DBI DBA	Enter DBD (Drop Back Busy Disabled). This will disable Drop Back Busy, and enable Remote Virtual Queueing for the customer. DBI = Drop Back if Initial set is busy. DBA = Drop Back if all routes are busy.

In Overlay 87, configure the originating nodes for CBQ.

Prompt	Response	Description
REQ	CHG	Change
CUST	0-31	Customer number
FEAT	NCTL	Network Control
...		
SCBQ	YES	Allow system Call Back queueing for the customer.
NCOS	nn	Network Class of Service number. The originating telephone must have the same value.
...		

Prompt	Response	Description
CBQ	YES, (NO)	Call Back Queueing allowed (not allowed) for this NCOS
RETT	2-(10)-30	Remote Virtual Queuing Retry Timer (Time between searches, in seconds).
RETC	4-(5)-16	Remote Virtual Queuing Retry Counter (Number of times RVQ searches the initial set before moving on to the extended set).

In Overlay 86 (Route List Data Block), configure the outgoing routes of the originating nodes for CBQ (at least one entry of the Initial set of the outgoing route has to allow CBQ).

Prompt	Response	Description
REQ	CHG	Change
CUST	nn	Customer number
FEAT	RLB	Route List data block
RLI	nn	Route List Index
ENTRY	nn	Route List entry number
- ROUT	nnn	Route number
...		
- CBQ	YES)	Allow CBQ
...		
ENTRY	<cr>	
ISET	nn	Size of the Initial set.

In Overlay 16 (Route Data Block), allow CBQ for the incoming non-ISDN routes on the originating nodes (for RVQ at a conventional Main operation).

Prompt	Response	Description
REQ	CHG	Change
TYPE	RDB	Route datablock
CUST	nn	Customer number
ROUT	nnn	Route number
...		
CBQ	YES	Allow Call Back Queueing
...		

Station Activity Records

LD 10 – Set Class of Service CDMA/CDMD for analog (500/2500 type) of telephone.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	500	Telephone type.
...		
CLS	(CDMD), CDMA	CDMA allows Station Activity Records to be generated for the set (when the trunk is involved in the call). CDMD denies record generation.

LD 11 – Set Class of Service CDMA/CDMD for Meridian 1 propriety telephone.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	xxxx	BCS set type.
...		
CLS	(CDMD), CDMA	CDMA allows Station Activity Records to be generated for the set (when the trunk is involved in the call). CDMD denies record generation.

LD 17 – Define a CDR link for Call Detail Recording.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration.
ADAN	NEW TTY xx	Add a port.
USER	CTY	TTY has CTY as the user (for CDR records).

LD 15 – Enable CDR for the customer.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB CDR_DATA	Customer data block. Call Detail Recording data (Release 21 gate opener).
CUST	0-31	Customer number.
- IMPH	(NO) YES	CDR for Incoming Packet data call
- OMPH	(NO) YES	CDR for Outgoing Packet data call
- AXID	(NO) YES	Auxiliary Identification output in CDR record
- TRCR	(NO) YES	Carriage Return sent after each CDR message
- CDPR	(NO) YES	Coordinated Dialing Plan Record option
- ECDR	(NO) YES	End-to-End Signaling digits in CDR record.
- OTCR	(NO) YES	CDR provided, based on Originally dialed Trunk Route
- PORT	0-15	The CDR port number for the customer.

Trunk Anti-Tromboning

LD 17 — Configure TAT functionality on the D-channel.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Type of change.
- ADAN		Action Device and Number.
	NEW DCH x	Add D-channel x.
	CHG DCH x	Change D-channel x.
- CTYP		Card type.
	MSDL	Downloadable D-channel.
- CDNO	1-10	The card number for the Downloadable D-channel.
- PORT	0-3	Port number on MSDL cards.
	1	Only port 1 is valid for the Downloadable D-channel.
...		
- IFC	SL1	Interface type for D-channel. Either SL1, S100, D100, or D250 may be entered. Currently, SL1 and D250 are the only interfaces supported by TAT.
	S100	
	D100	
	D250	
...		
- RLS	xx	Release ID of the switch at the far end of the D-channel. Release 21 or higher must be entered.
- RCAP	TAT	Remote Capabilities. TAT must be entered to enable Trunk Anti-Tromboning.

Trunk Optimization (before answer)

Trunk optimization is configured in LD16.

Procedure 31

Respond to the following prompts in LD16

Prompt	Response	Description
REQ	CHG	
TYPE	RDB	Route data block
CUST	0-31	Customer number
ROUT	nnn	Route number 0-511 for NT, XT, 61, 71, and 81 0-127 for ST, 21, STE, 21E
DTRK	YES, (No)	Digital Trunk Route Must be Yes to prompt ISDN
ISDN	YES, (No)	ISDN option
NCRD	YES, (No)	Network Call Redirection. Allows network call redirection messages to be sent (or blocks messages if NCRD =no). Must be Yes to prompt TRO.
TRO	YES, (No)	Trunk Optimization

Trunk to Trunk Connection

LD 15 – Modifications to Customer Data Block.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	ATT	Attendant console prompts.
CUST	xx	Customer number.
RTIM	xxx yyy zzz	Enter defined value for the Slow Answer Recall timer where: xxx = 0-(30)-378 Slow Answer Recall yy y= 0-(30)-510 Camp On Recall zzz = 0-(30)-510 Call Waiting Recall

LD 15 – Modifications to Customer Data Block

Prompt	Response	Description
REQ:	CHG	Change
TYPE	NET	Trunk and network options.
CUST	xx	Customer number.
...		
ISDN	YES	Change the Integrated Services Digital Network options.
- PSTN	NO	Public Switched Telephone Network. Limit the number of PSTNs allowed in a network connection to one PSTN. NO= Puts no limit on the number of PSTN connections. YES = Limits the number of PSTN connections.
...		
DITI	YES	Allow Direct Inward Dialing to TIE connections for customer.

TRNX	YES	YES = Allows transfer on ringing of an external trunk over a supervised analog network TIE trunk across private network. NO= Prevents transfer on ringing of an external trunk over a supervised analog network TIE trunk across private network.
EXTT	YES	YES = Allows connection of supervised external trunks. NO = Prevents connection of supervised external trunks.

Virtual network services

LD 17 – Configure Virtual Network Services.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	ADAN aaa xx	Release 19 gate opener. DCH 0 - 15
...		
- USR	VNS SHAV	To define a D-channel used for Virtual Network Services (or ISLD). To define a D-channel shared between PRI and VNS (and ISLD).
- VNSM	0-100	Define the maximum number of VNS channels over the D-channel.
- VNSC	xx	Virtual Network Services Customer number.
- VNSP	0-32700	Private Network Identifier (PNI) of the far end customer.
- VNCA	YES	Network Call Party Name Display is available over this D-channel for VNS.
- VCRD	YES	Network Call Redirection is available over this D-channel for VNS.
- VTRO	YES	Trunk Route Optimization before answer is available over this D-channel for VNS. This prompt is optional and is not a prerequisite for VNS.

The following steps describe how to:

- Add or create a new single VDN or a block of contiguous VDNs
- Remove a single VDN or a block of contiguous VDNs
- Disable or enable a block of VDNs, or print VNS information for a customer

LD 79 - Add or create a new single VDN or a block of contiguous VDNs.

Prompt	Response	Description
REQ	NEW	Add or create a new single VDN or a block of contiguous VDNs. Note: The CHG command is not supported; you must use the NEW command to enter information.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number.
VNDN	xx...x 1-4000 xx...x <CR>	Individual VDN to be added. 1-4000 = number of contiguous VDN to be added xx...x = first VDN to be added. You may add another single VDN or a block of contiguous VDNs by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again. Note: For the above entries, the VDNs must be part of the customer's numbering plan.

LD 79 - Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks.

Prompt	Response	Description
REQ	OUT	Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks. Note: You cannot remove only certain VDNs from a block; you have to remove the entire block.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	XALLVDNS xx...X <CR>	Remove all VNS data blocks. Remove an individual VDN, or the first VDN of a block of contiguous VDNs. You may remove another single VDN, or a block of contiguous VDNs, by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again. If XALLVDNS is entered, the message REMOVE ALL VDN BLOCKS? is then output, followed by the CONF prompt.
CONF	YES	To confirm the removal of all VDN blocks.

LD 79 – Disable or enable single VDN, or a block of contiguous VDNs.

Prompt	Response	Description
REQ	DIS ENL	Disable a single VDN or a block of contiguous VDNs Enable a single VDN or a block of contiguous VDNs
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	xx....x <CR>	Individual VDN, or first VDN of a block of contiguous VDNs to be disabled or enabled. You may enable or disable another single VDN, or a block of contiguous VDNs, by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again.

LD 79 – Print VNS information for a customer.

The information is output after the customer number is entered in response to the CUST prompt.

Prompt	Response	Description
REQ	PRT	Print VDN information.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number. The VNS information is output for the customer. For a range of VDNs, the first VDN is displayed, followed by “—” and the last VDN of the block. On the same line, the number of VDNs in the block is displayed in brackets. For a single VDN, the VDN is displayed followed by “(1)”. If a block is disabled, the above indication is followed by the number of VNS calls still using a VDN in the block. These calls have to be cleared before the VDN block can be removed. At the end, the total number of VDNs configured for the customer is output. A sample output could be: <pre>7676 (1) 8100-8199 (100) TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> If the VDN block 8100-8199, containing 100 VDNs, is disabled, the output would be: <pre>7676 (1) 8100-8199 (100) *DISABLED - VDN USED: 2* TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> In this case, the VDN block is disabled and two VNS calls are still using two VDNs. These two calls must first be cleared before the VDN block 8100-8199 can be removed.

LD 86 – Assign D-channel number and VNS digit manipulation index to be used when signaling on the Bearer trunk and on the D-channel.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
...		
ENTR	0-63	Entry number for NARS/BARS Route List.
ROUT	0-511	The number of the route to be associated with the VNS Bearer channel.
VNS	YES	Virtual Network Services.
VDCH	0-63	The D-channel used for these VNS calls (must be configured in LD 17).
	0-15	For Option 11.
VDMI	xxx	The Digit Manipulation Table to be used on the VNS D-channel.
	(0)	No digit manipulation required.
	1-31	For Coordinated Dialing Plan feature.
	1-255	For NARS/BARS.
VTRK	1-(20)-100	Number of VNS trunks allowed on the route.
DMI	xxx	The Digit Manipulation table to be used on the VNS Bearer.
	(0)	No digit manipulation required.
	1-31	For Coordinated Dialing Plan feature.
	1-255	For NARS/BARS.

LD 16 – The following TIMR, TIMR, and VRAT prompts have been added to this overlay:

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-511	The number of the route to be associated with the incoming VNS Bearer channel.
CNTL	YES	Change control of timers.
- TIMR	VSS (0) 1 2-1023	VNS Set Speechpath Timer 0 = Do not answer the bearer channel until the terminating party answers. 1 = Answer the Bearer channel immediately on arrival. 2-1023 = Answer the Bearer channel after specified seconds (rounded down to two-second multiples) if the terminating party has not already answered.
- TIMR	VGD 0-(6)-31	VNS Guard Timer The time allowed for the Bearer trunk call to disconnect, in seconds. This is a guard timer on the associated VNS DN.
...		
VRAT	(NO) YES	VNS Return Attendant Tones Option Do (not) answer an attendant extended call over VNS immediately on the incoming Bearer trunk.

Virtual Network Services Virtual Directory Number Expansion

LD 79 - Add or create a new single VDN or a block of contiguous VDNs.

Prompt	Response	Description
REQ	NEW	Add, or create a new single VDN or a block of contiguous VDNs. Note: The CHG command is not supported; you must use the NEW command to enter information.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR=SHAV and having VNS = Customer number.
VNDN	xx...x 1-4000 xx...x <CR>	Individual VDN to be added. 1-4000 = number of contiguous VDN to be added xx...x = first VDN to be added. You may add another single VDN or a block of contiguous VDNs by entering <cr> after the VNDN entry (VNDN is prompted until <cr> is entered.) In this case, the REQ prompt will appear again. Note: For the above entries, the VDNs must be part of the customer's numbering plan.

LD 79 - Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks.

Prompt	Response	Description
REQ	OUT	Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks. Note: You cannot remove only certain VDNs from a block; you must remove the entire block.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = Customer number.
VNDN	XALLVDNS xx...x <CR>	Remove all VNS data blocks. Remove an individual VDN, or the first VDN of a block of contiguous VDNs. You may remove another single VDN, or a block of contiguous VDNs, by entering <cr> after the VNDN entry (VNDN is prompted until <cr> is entered.) In this case, the REQ prompt will appear again. If XALLVDNS is entered, the message REMOVE ALL VDN BLOCKS? is then output, followed by the CONF prompt.
CONF	YES	To confirm the removal of all VDN blocks.

LD 79 – Disable or enable single VDN, or a block of contiguous VDNs.

Prompt	Response	Description
REQ	DIS ENL	Disable a single VDN or a block of contiguous VDNs Enable a single VDN or a block of contiguous VDNs
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = Customer number.
VNDN	xx....x <CR>	Individual VDN, or first VDN of a block of contiguous VDNs to be disabled or enabled. You may enable or disable another single VDN or a block of contiguous VDNs, by entering <CR> after the VNDN entry (VNDN is prompted until <CR> is entered.) In this case, the REQ prompt will appear again.

LD 79– Print VNS information for a customer.

The information is output after the customer number is entered in response to the CUST prompt.

Prompt	Response	Description
REQ	PRT	PRT = print VDN information.
TYPE	VNS	Virtual Network Services.
CUST	xx	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = Customer number. The VNS information is output for the customer. For a range of VDNs, the first VDN is displayed, followed by “—” and the last VDN of the block. On the same line, the number of VDNs in the block is displayed in brackets. For a single VDN, the VDN is displayed followed by “(1)”. If a block is disabled, the above indication is followed by the number of VNS calls still using a VDN in the block. These calls have to be cleared before the VDN block can be removed. At the end, the total number of VDNs configured for the customer is output. A sample output could be: <pre>7676 (1) 8100-8199 (100) TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> If the VDN block 8100-8199, containing 100 VDNs, is disabled, the output would be: <pre>7676 (1) 8100-8199 (100) *DISABLED - VDN USED: 2* TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> In this case, the VDN block is disabled and two VNS calls are still using two VDNs. These two calls must first be cleared before the VDN block 8100-8199 can be removed.

LD 17 – Define the maximum number of VNS channels supported by a D-Channel.

Prompt	Response	Description
REQ	CHG, END	Change, or exit LD 17.
TYPE	ADAN	Action Device and Number.
- ADAN	CHG DCH 0-63	The D-Channel number for Options 51C, 61C, 81, 81C.
	CHG DCH 0-15	For Option 11C.
...		
- USR	VNS SHAV	VNS = dedicated VNS D-Channel SHAV = shared VNS D-Channel
...		
- - VNSM	1-300	Maximum number of VNS channels supported by the D-Channel. Note: This is the potential VNS capability for the D-Channel and is not associated with other restrictions placed on VNS capability, such as the number of VDNs.

LD 86 – Define the maximum number of VNS trunks allowed on the route list entry.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
CUST	xx	Customer number.
FEAT	RLB	Route list data block feature.
RLI	0-MXRL	The Route List Index to be associated with the VNS Bearer Channel.
ENTR	0-63	The entry within the Route List Index to be associated with the VNS Bearer Channel.
ROUT	0-511	The number of the Route to be associated with the VNS Bearer Channel.
VNS	YES	Virtual Network Services.
...		
VTRK	1-(20)-254	Number of VNS Trunks allowed on the route.